Exhibit

SACE
Docket No. E-7, Sub 1230
DSM/EE Rider
SACE Data Request No. 1
Item No. 1-14

DUKE ENERGY CAROLINAS

Request:

Please provide a calculation of DSM/EE portfolio savings with and without line loss (1) as percentage of total annual sales; and (2) as a percentage of annual sales to non-opt-out customers:

a. for the year 2019 (as a percentage of 2018 retail sales); and
b. forecasted for the year 2021 (as a result of forecasted 2020 sales).

Response:

Please refer to "CCL-SACE DR1-14.xlsx."

CCL-SACE%20DR1-14.xlsx

Duke Energy Carolinas

CCL_SACE DR 1-14

2019 Incremental Energy Savings	794,856,771	kWh	Evans Exhibit 1 page 3 (2019) line 28 - adjusted for line loss
2019 Opt Out Electricity Sales - NC	20,042,218,854	kWh	Miller Exh 6, Line 8
2019 Opt Out Electricity Sales - SC	10,446,567,023	kWh	Exhibit 3 pg 1 of 2, Line 12
2018 System Retail Billed Electricity Sales	81,399,234	MWh	2018 RAC Report

2021 Incremental Energy Savings	715,710,984	kWh	Evans Exhibit 1 page 4 (2021) line 27 - adjusted for line loss
2021 Opt Out Electricity Sales - NC	20,419,288,797	kWh	Miller Exh 6, Line 12
2021 Opt Out Electricity Sales - SC	10,490,870,196	kWh	Exhibit 3 pg 1 of 2, Line 16
2020 System Retail Electricity Sales	80,141,016	MWh	2019 Fall Forecast, sales at meter

1. Please provide a calculation of DSM/EE portfolio savings with and without line loss (1) as a percentage of total annual sales; and (2) as a percentage of annual sales to non-opt-out customers:
a. for the year 2019 (as a percentage of 2018 retail sales);

2019 Incremental Energy Savings	794,856.77	MWh
2018 System Retail Electricity Sales	81,399,234	MWh
Savings as % of 2018 Sales	0.98%	

2019 Incremental Energy Savings	794,856.77	MWh
2018 System Retail Electricity Sales, net of 2019 Opt Out	50,910,448	MWh
Savings as % of 2018 Sales, net of 2019 Opt Out	1.56%	

1. Please provide a calculation of DSM/EE portfolio savings with and without line loss (1) as a percentage of total annual sales; and (2) as a percentage of annual sales to non-opt-out customers:
b. forecasted for the year 2021 (as a result of forecasted 2020 sales).

2021 Incremental Energy Savings	715,710.98	MWh
2020 System Retail Electricity Sales	80,141,016	MWh
Savings as % of 2020 Sales	0.89%	

Exhibit 2

Docket E-7, Sub 1230
FBW Exhibit 8

Duke Energy Carolinas Collaborative Meeting

March 19, 2020

DUKE ENERGY®

Meeting Agenda

- Safety
- Regulatory Update
- Market Potential Study Update
- Residential Program Updates
- ISOP Planning
- Lunch
- Nonresidential Program Updates
- New Program Ideas
- Wrap Up and Scheduling

Safety

Meeting Safety

- What to do in case of Evacuation
- What to do in case of Emergency

9 in 10 employees come to work sick, survey shows

Among the 28 U.S. cities in the study, Charlotte, Miami (96 percent each), Austin, Chicago, and Cincinnati (93 percent each) had the most employees who show up while feeling ill.

Cold and Flu Safety Tips

- Avoid close contact with people who are sick.
- Avoid touching your eyes, nose, and mouth.
- Stay home when you are sick.
- Cover your cough or sneeze with a tissue, then throw the tissue in the trash.
- Clean and disinfect frequently touched objects and surfaces
- Wash your hands often with soap and water for at least 20 seconds, especially after going to the bathroom; before eating; and after blowing your nose, coughing, or sneezing.

Regulatory Update

North Carolina

- DEC Filing February 25, 2019, E-7 sub 1230

South Carolina

- DEC Filing March 2, 2019, 2020-83-E

- Program filings:
  - Residential New Construction – negotiations ongoing post-technical conference
  - Program modifications (NES 2.0, Home Energy House Call, DRA)
  - New Mechanism
    - Comments filed, awaiting NCUC action
    - Moving discussion to SC

DUKE ENERGY®

Program Year End Updates

2019

Portfolio Summary : DEC

2019 Portfolio Summary

Demand (MW) Actual	Energy (MWh)	Actual Expenditures	Performance Incentives	Total Annual Energy Sales	% of Energy Sales	UCT Score	TRC Score
1,103.00	844,287	$150,420,388	$33,457,516	49,620,203	2%	2.91	2.69

Company Statistics

Prior Year & YTD Revenues & Expenditures

		Budget		Actual	
Program Year	Total Revenue ($MM)	Portfolio Budget	% of Revenue	Portfolio Spending	% of Revenue
2016	$7,322	$123,781,349	1.7%	$151,574,107	2.1%
2017	$7,302	$130,617,734	1.8%	$192,488,915	2.6%
2018	$7,300	$141,778,571	1.9%	$159,005,671	2.2%
2019	$7,395	$144,837,499	2.0%	$150,420,388	2.0%

Energy

		Budget		Actual	
Program Year	Prior Yr Annual Energy Sales (Net of Opt-Out)	Net Annual Savings	% of Energy Sales	Net Annual Savings	% of Energy Sales
2016	54,596,302	591,015	1.1%	801,779	1.5%
2017	54,309,422	608,070	1.1%	934,676	1.7%
2018	51,467,402	816,508	1.6%	887,162	1.7%
2019	49,620,203	781,394	1.6%	844,287	1.7%

Note:
Actual Annual Savings Portfolio Spending & Total Revenue reflect Year-to-date values

Portfolio Summary : DEP

2019 Portfolio Summary

Demand (MW) Actual	Energy (MWh)	Actual Expenditures	Performance Incentives	Total Annual Energy Sales	% of Energy Sales	UCT Score	TRC Score
133.57	366,018	$87,400,540	$15,017,088	28,182,233	1%	2.40	2.32

Company Statistics

Prior Year & YTD Revenues & Expenditures

		Budget		Actual	
Program Year	Total Revenue ($MM)	Portfolio Budget	% of Revenue	Portfolio Spending	% of Revenue
2016	$5,277	$86,525,157	1.6%	$85,558,746	1.6%
2017	$5,129	$87,923,780	1.7%	$92,232,546	1.8%
2018	$5,699	$83,107,282	1.5%	$86,641,573	1.5%
2019	$5,957	$89,592,768	1.5%	$87,400,540	1.5%

Energy

		Budget		Actual	
Program Year	Prior Yr Annual Energy Sales (Net of Opt-Out)	Net Annual Savings	% of Energy Sales	Net Annual Savings	% of Energy Sales
2016	31,454,848	351,831	1.1%	339,918	1.1%
2017	30,908,887	350,851	1.1%	378,262	1.2%
2018	29,943,275	324,305	1.1%	356,587	1.2%
2019	28,182,233	341,047	1.2%	366,018	1.3%

Note:
Actual Annual Savings Portfolio Spending & Total Revenue reflect Year-to-date values

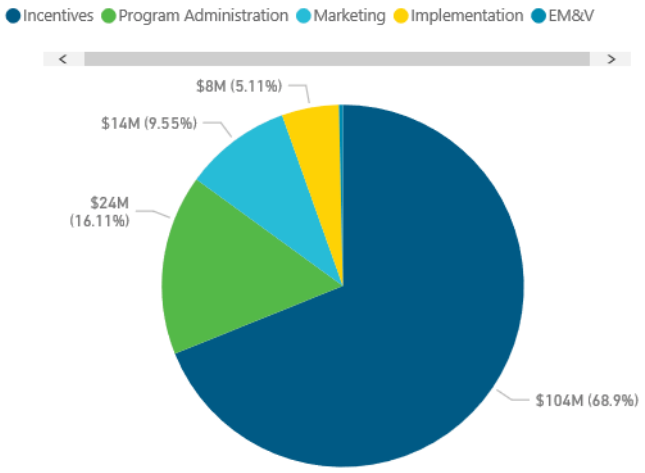
DEC Portfolio Support

2019 EE Portfolio Expenditures by Program

Program	Program Type	Actual Costs	Budget Costs	%
Energy Assessments	Residential-EE	$3,186,888	$2,987,118	107%
Energy Efficiency Education	Residential-EE	$1,684,083	$2,104,087	80%
Energy Efficient Appliances and Devices	Residential-EE	$41,380,987	$21,726,700	190%
HVAC Energy Efficiency	Residential-EE	$7,400,669	$4,802,289	154%
Income Qualified Energy Efficiency and Weatherization Assistance	Residential-EE	$7,342,133	$7,905,880	93%
Multi-Family Energy Efficiency	Residential-EE	$3,680,155	$3,382,816	109%
My Home Energy Report	Residential-EE	$10,555,159	$13,406,971	79%
PowerManager	Residential-DSM	$13,383,639	$14,055,575	95%
Non Residential Energy Efficient ITEE	Non-Residential-EE	$44,323	$749,325	6%
Non Residential Energy Efficient Process Equipment Products	Non-Residential-EE	$119,811	$240,281	50%
Non Residential Energy Efficient Pumps and Drives Products	Non-Residential-EE	$189,123	$1,165,434	16%
Non Residential Smart Saver Custom	Non-Residential-EE	$8,871,440	$10,095,189	88%
Non Residential Smart Saver Custom Technical Assessments	Non-Residential-EE	$295,925	$1,618,240	18%
Non Residential Smart Saver Energy Efficient Food Service Products	Non-Residential-EE	$339,904	$2,010,534	17%
Non Residential Smart Saver Energy Efficient HVAC Products	Non-Residential-EE	$2,207,760	$5,762,803	38%
Non Residential Smart Saver Energy Efficient Lighting Products	Non-Residential-EE	$20,829,118	$17,828,618	117%
Non Residential Smart Saver Performance Incentive	Non-Residential-EE	$784,949	$3,162,160	25%
Small Business Energy Saver	Non-Residential-EE	$11,418,264	$14,602,066	78%
EnergyWise for Business	Non-Residential-DSM	$3,686,451	$3,967,504	93%
PowerShare	Non-Residential-DSM	$13,019,606	$13,263,911	98%
Total		**$150,420,388**	**$144,837,499**	**104%**

2019 EE Portfolio Expenditure Summary by Cost Type

Cost Category	% of Total	Budget Costs	Actual Costs	% of Total
EM&V	0.67%	$977,000	$512,097	0.34%
Implementation	5.60%	$8,104,227	$7,679,277	5.11%
Incentives	61.33%	$88,824,951	$103,632,631	68.90%
Marketing	13.46%	$19,496,106	$14,361,529	9.55%
Program Administration	18.94%	$27,435,216	$24,234,855	16.11%
Total	**100.00%**	**$144,837,499**	**$150,420,388**	**100.00%**



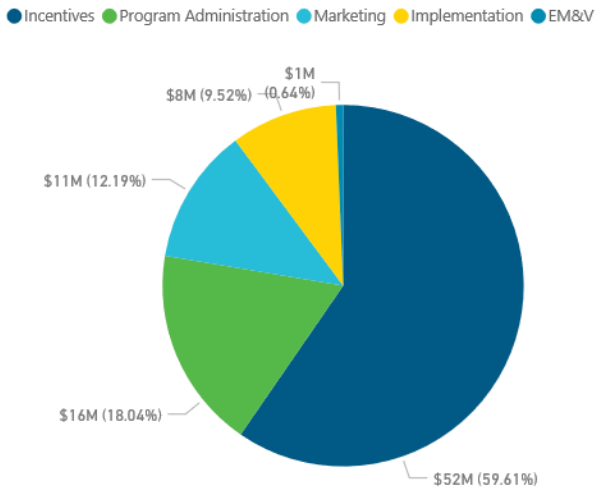
DEP Portfolio Support

2019 EE Portfolio Expenditures by Program

Program	Program Type	Actual Costs	Budget Costs	%
Appliances and Devices	Residential-EE	$1,226,733	$1,527,511	80%
Energy Education Program for Schools	Residential-EE	$745,829	$753,793	99%
Energy Efficient Lighting	Residential-EE	$14,346,463	$13,209,118	109%
Low Income Weatherization Pilot	Residential-EE	$27,295	$0	0%
Multi-Family	Residential-EE	$2,151,724	$2,738,339	79%
My Home Energy Report	Residential-EE	$6,746,551	$7,994,059	84%
Neighborhood Energy Saver	Residential-EE	$1,667,723	$2,028,200	82%
Residential Energy Assessments	Residential-EE	$2,109,106	$1,138,481	185%
Residential New Construction	Residential-EE	$15,080,405	$12,691,351	119%
Residential Smart$aver	Residential-EE	$6,397,527	$3,985,069	161%
EnergyWise	Residential-DSM	$14,537,464	$14,086,536	103%
Non-Residential Smart$aver Custom	Non-Residential-EE	$2,769,305	$2,719,960	102%
Non-Residential Smart$aver Performance	Non-Residential-EE	$269,460	$845,910	32%
Non-Residential Smart$aver Prescriptive	Non-Residential-EE	$7,948,870	$11,408,405	70%
Small Business Energy Saver	Non-Residential-EE	$7,346,426	$9,294,966	79%
Commercial, Industrial, & Governmental Demand Response	Non-Residential-DSM	$1,647,027	$2,694,260	61%
EnergyWise for Business	Non-Residential-DSM	$2,382,632	$2,476,808	96%
Total		**$87,400,540**	**$89,592,768**	**98%**

2019 EE Portfolio Expenditure Summary by Cost Type

Cost Category	% of Total	Budget Costs	Actual Costs	% of Total
EM&V	1.37%	$1,225,000	$560,428	0.64%
Implementation	7.34%	$6,573,038	$8,324,514	9.52%
Incentives	56.31%	$50,453,958	$52,098,767	59.61%
Marketing	13.34%	$11,953,585	$10,652,278	12.19%
Program Administration	21.64%	$19,387,187	$15,764,554	18.04%
Total	**100.00%**	**$89,592,768**	**$87,400,540**	**100.00%**



DUKE ENERGY®

Residential Program Updates

Income-Qualified Programs

Neighborhood Energy Savers

Income Qualified Energy Efficiency and Weatherization Assistance[1]

$ in millions, rounded	Vintage 2019 As Filed	Vintage 2019 YTD December 31, 2019	% of Target
NPV of Avoided Cost	**$1.5**	**$3.6**	**239%**
Program Cost	**$7.9**	**$7.3**	**93%**
MW	**0.6**	**1.1**	**173%**
MWH	**4,043.4**	**9,029.8**	**223%**
Units	**10,114**	**10,814**	**107%**

1) Values are reflected at the system level.

2019 YTD Results	Annual Forecast	Actual at 12/31/2019	Variation
Savings (MWH)	2,135	3,829	1,694
Savings (MW)	0.33	0.52	0.19
Participants		5,825	
2019 Program Expenses		$1,695,018	

Neighborhood Energy Savers

- Served the communities in the following towns:
  - Bessemer City, Burlington, Charlotte, Durham, Greensboro, Hickory, Kannapolis, Winston-Salem, Spring Lake, Dunn, Rockingham
  - Greenville, Kershaw, Spartanburg, Manning, Florence

NES	Goal		Actual
DEC NC	6,516		6,625
DEC SC	2,410		3,193
DEP NC	3,825		2,722
DEP SC	675		1,795

Weatherization and Equipment Replacement, Refrigerator Replacement

- working with the NC and SC Weatherization Agencies to deliver this program
- 736 homes received weatherization in conjunction with the DOE weatherization program, with 292 refrigerators replaced, 69 Tier 1 services provided and 667 Tier 2 services provided

Weatherization	Goal	Actual
DEC NC	880	736
DEC SC	60	16
Refrigerator Replacement		
DEC NC	150	222
DEC SC	15	70

Combined

DEC Wx - Project Type	Projects	Total Paid
Refrigerator Replacement	190	$ 158,940.83
Weatherization Tier 1	70	$ 39,428.03
Weatherization Tier 2	353	$ 910,446.96
HVAC Replacment	238	$ 1,404,793.47
Total	851	$ 2,513,609.29

NC

DEC Wx - Project Type	Projects	Total Paid
Refrigerator Replacement	120	$ 104,706.00
Weatherization Tier 1	70	$ 39,428.03
Weatherization Tier 2	353	$ 910,446.96
HVAC Replacment	222	$ 1,316,592.01
Total	765	$ 2,371,173.00

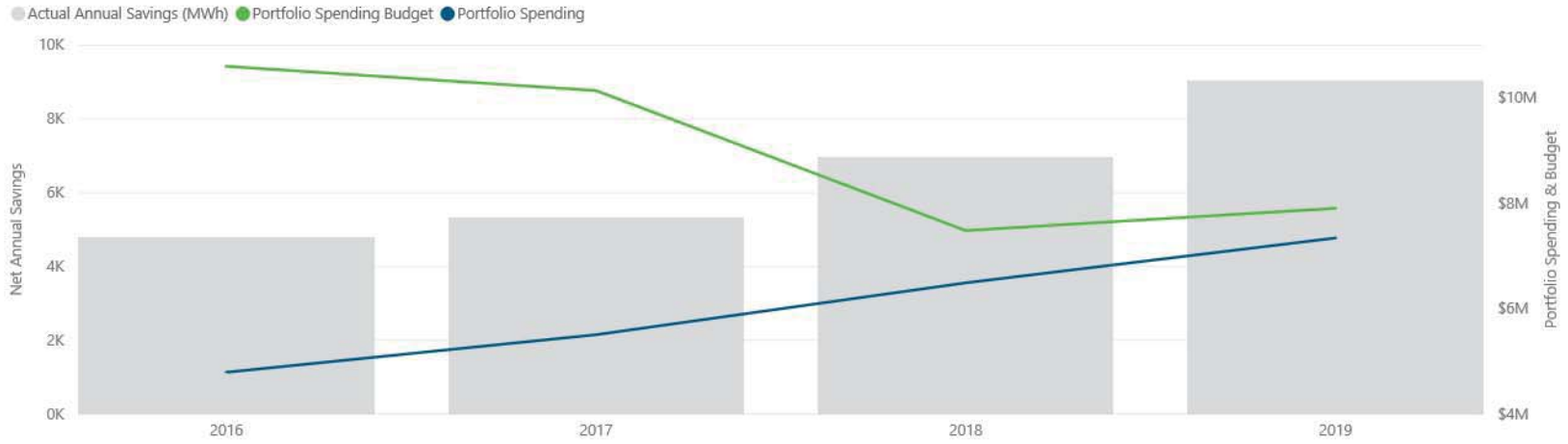
SC

DEC Wx - Project Type	Projects	Total Paid
Refrigerator Replacement	70	$ 54,234.83
Weatherization Tier 1		
Weatherization Tier 2		
HVAC Replacment	16	$ 88,201.46
Total	86	$ 142,436.29

DEC NES and Weatherization

Income Qualified Energy Efficiency and Weatherization Assistance Program Budget, Savings & Number of Measures

	Expenditures			Energy Savings			Demand Savings			Participants		
Program Year	Budget	Actual	%	Budget	Actual	%	Budget	Actual	%	Budget	Actual	%
2017	$10,141,446	$5,505,992	54%	5,310	5,342	101%	1.05	0.77	74%	10,538	11,726	111%
2019	$7,905,880	$7,342,133	93%	4,043	9,030	223%	0.64	1.11	173%	10,114	10,814	107%
2018	$7,483,328	$6,490,735	87%	5,287	6,973	132%	0.82	0.90	110%	10,426	10,681	102%
2016	$10,601,322	$4,792,436	45%	5,010	4,801	96%	1.00	0.65	65%	10,421	9,339	90%



DEP NES

Neighborhood Energy Saver Program Budget, Savings & Number of Measures

	Expenditures			Energy Savings			Demand Savings			Participants		
Program Year	Budget	Actual	%	Budget	Actual	%	Budget	Actual	%	Budget	Actual	%
2018	$1,922,686	$1,845,739	96%	2,033	2,279	112%	0.31	0.35	112%	4,503	5,047	112%
2017	$1,830,237	$1,781,211	97%	1,735	2,200	127%	0.30	0.34	110%	4,500	4,873	108%
2019	$2,028,200	$1,667,723	82%	2,135	3,699	173%	0.33	0.49	151%	4,729	4,517	96%
2016	$1,792,345	$2,052,535	115%	1,735	1,992	115%	0.30	0.30	100%	4,500	4,412	98%

Programs that are free to Participants

Multi-Family Energy Efficiency

Multi-Family Energy Efficiency[1]

$ in millions, rounded	Vintage 2019 As Filed	Vintage 2019 YTD December 31, 2019	% of Target
NPV of Avoided Cost	**$9.6**	**$11.9**	**124%**
Program Cost	**$3.4**	**$3.7**	**109%**
MW	**2.0**	**2.6**	**132%**
MWH	**19,846.4**	**24,086.2**	**121%**
Units	**342,660**	**493,307**	**144%**

1) Values are reflected at the system level.

2019 YTD Results	Annual Forecast	Actual at 12/31/2019	Variation
Savings (MWH)	15,206	14,966	-240
Savings (MW)	2.13	2.05	-0.09
Participants		389,131	
2019 Program Expenses		$3,081,002	

Multi-Family Energy Efficiency

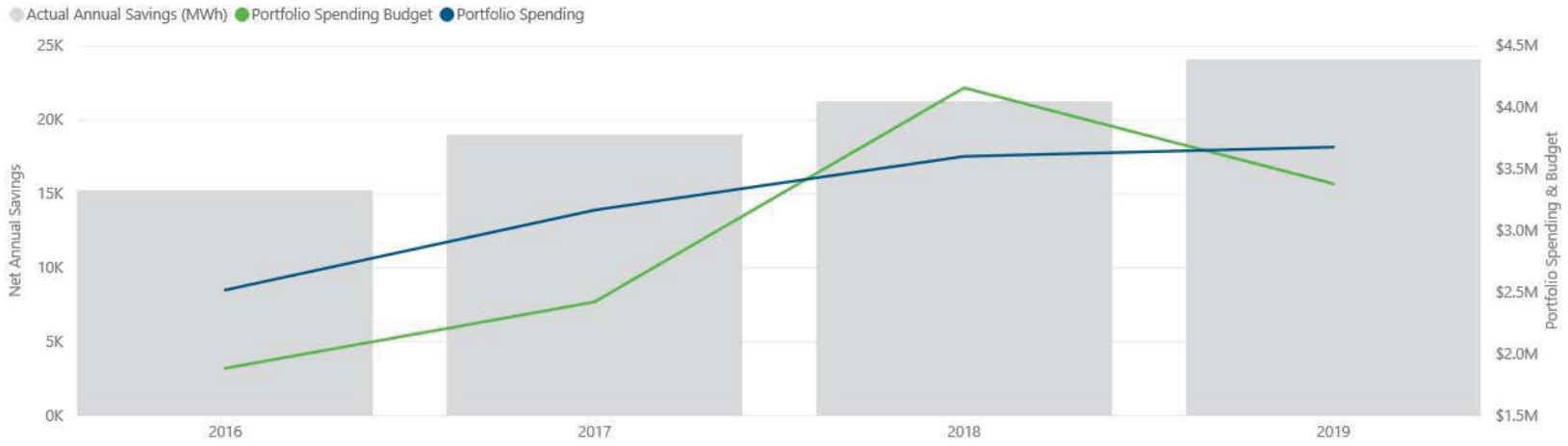
- Total 112 properties in DEP (15, 763 units) and 293 in DEC (46,422 units)
- 71+% lighting measures, remaining is water measures
- Marketing:
  - Outbound calls and on-site visits to property managers
  - Apartment association memberships, trade shows
  - Public website
  - Brochures
  - Tenant materials

Multifamily		
Jurisdiction	**Properties**	**Units**
DEC - NC	161	26,087
DEC - SC	20	4,572
DEP - NC	101	15,002
DEP - SC	11	761
Grand Total	293	46,422

DEC Multifamily

Multi-Family Energy Efficiency Program Budget, Savings & Number of Measures

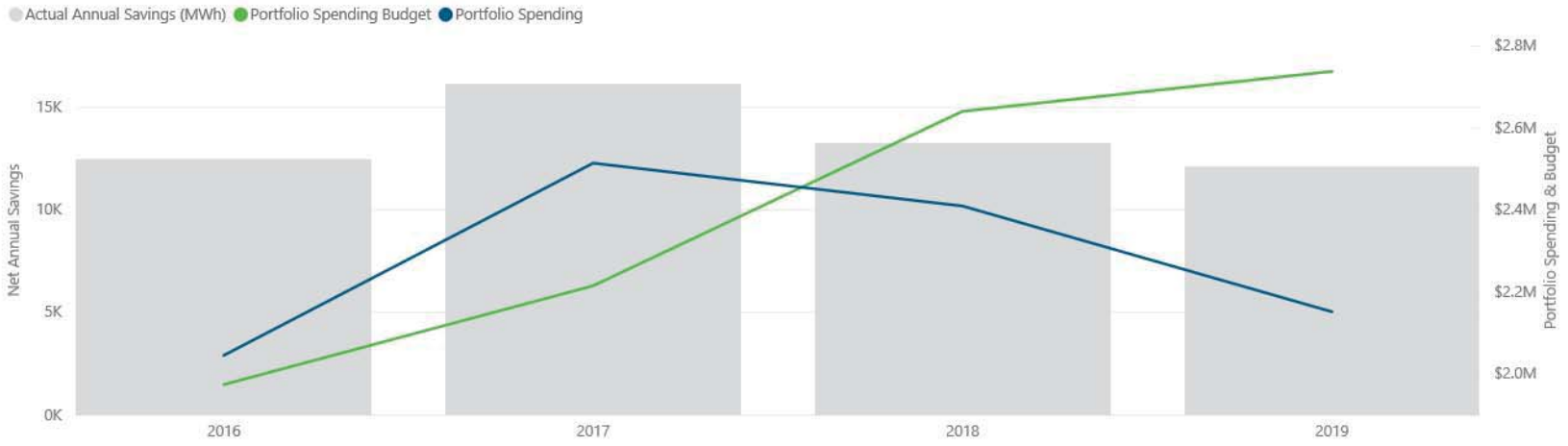
	Expenditures			Energy Savings			Demand Savings			Participants		
Program Year	Budget	Actual	%	Budget	Actual	%	Budget	Actual	%	Budget	Actual	%
2019	$3,382,816	$3,680,155	109%	19,846	24,086	121%	2.00	2.65	132%	342,660	493,307	144%
2018	$4,161,326	$3,604,921	87%	22,582	21,289	94%	2.20	2.30	105%	370,882	430,475	116%
2017	$2,422,689	$3,168,422	131%	12,688	19,056	150%	1.19	1.92	161%	186,948	356,003	190%
2016	$1,883,584	$2,518,988	134%	12,320	15,235	124%	1.02	1.57	154%	151,004	269,671	179%



DEP Multifamily

Multi-Family Program Budget, Savings & Number of Measures

	Expenditures			Energy Savings			Demand Savings			Participants		
Program Year	Budget	Actual	%	Budget	Actual	%	Budget	Actual	%	Budget	Actual	%
2017	$2,215,099	$2,514,413	114%	10,444	16,151	155%	1.02	2.05	200%	201,072	297,837	148%
2018	$2,640,920	$2,409,743	91%	13,579	13,292	98%	1.84	1.74	95%	264,177	288,093	109%
2019	$2,738,339	$2,151,724	79%	15,206	12,107	80%	2.13	1.62	76%	291,444	285,365	98%
2016	$1,974,027	$2,045,220	104%	10,993	12,462	113%	1.08	1.48	137%	211,656	240,436	114%



My Home Energy Reports (MyHER)

My Home Energy Report[1]

$ in millions, rounded	Vintage 2019 As Filed	Vintage 2019 YTD December 31, 2019	% of Target
NPV of Avoided Cost	$20.9	$23.4	112%
Program Cost	$13.4	$10.6	79%
MW[2]	79.4	91.4	115%
MWH[2]	312,934.1	328,439.1	105%
Units[3]	1,364,000	1,339,152	98%

1) Values are reflected at the system level.

2) Values represent the annual MW and MWH savings associated with the December 2019 month end participation.

3) At month-end December 2019, single-family participation was 1,183,442, while multifamily participation was 155,710.

2019 YTD Results	Annual Forecast	Actual at 12/31/2019	Variation
Savings (MWH)	119,273	154,602	35,329
Savings (MW)	20.01	54.25	34.24
Participants		769,490	
2019 Program Expenses		$6,746,551	

My Home Energy Reports (MyHER)

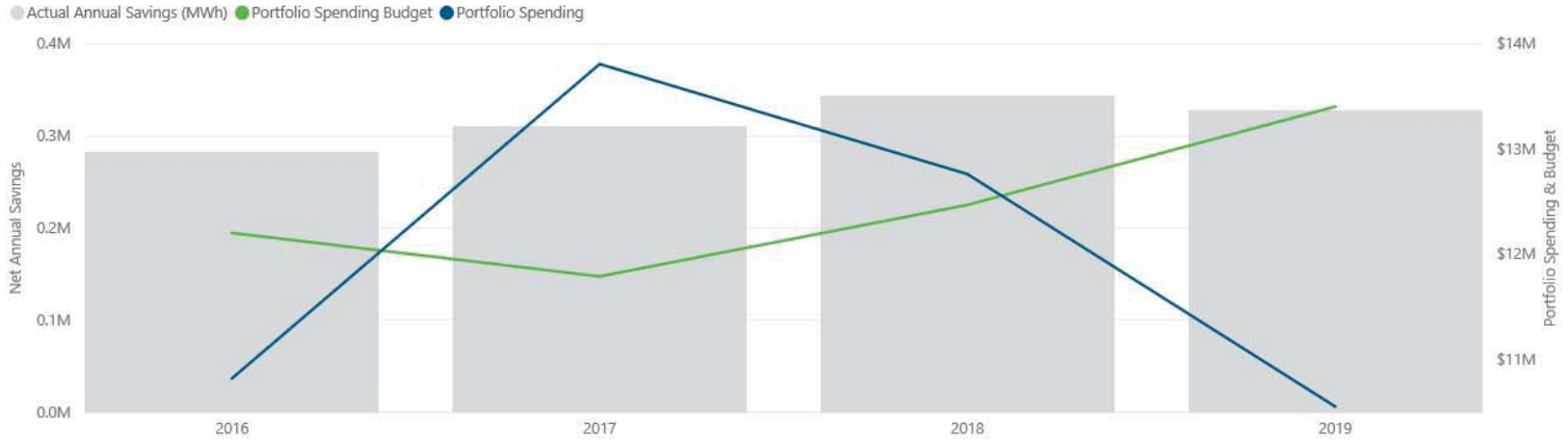
Total DEC			
NC		**SC**	
Single Family	68%	**Single Family**	21%
Paper	63%	Paper	19%
Online	5%	Online	2%
Multifamily	9%	**Multifamily**	2%
Paper	9%	Paper	2%
Online	0.7%	Online	0.2%

Total DEP			
NC		**SC**	
Single Family	82%	**Single Family**	9%
Paper	76%	Paper	9%
Online	6%	Online	0.6%
Multifamily	8%	**Multifamily**	1%
Paper	7%	Paper	1%
Online	0.4%	Online	0.1%

DEC My Home Energy Reports

My Home Energy Report Program Budget, Savings & Number of Measures

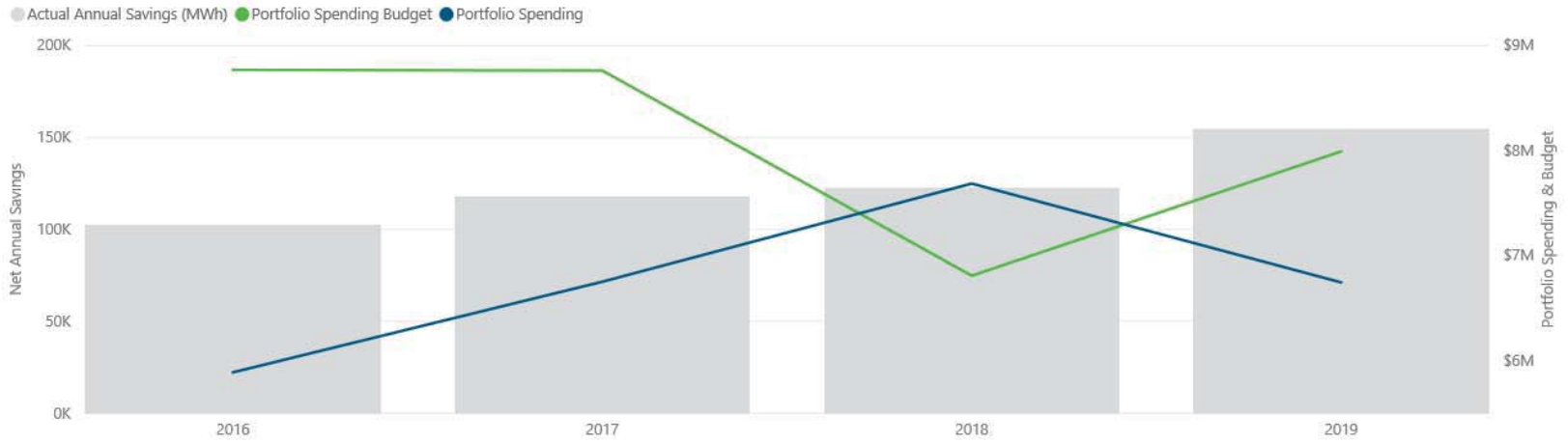
	Expenditures			Energy Savings			Demand Savings			Participants		
Program Year	Budget	Actual	%	Budget	Actual	%	Budget	Actual	%	Budget	Actual	%
2018	$12,472,487	$12,765,286	102%	304,387	344,760	113%	77.28	95.89	124%	1,354,138	1,432,263	106%
2017	$11,792,498	$13,812,250	117%	211,048	311,369	148%	56.98	79.07	139%	1,050,000	1,394,693	133%
2019	$13,406,971	$10,555,159	79%	312,934	328,439	105%	79.36	91.39	115%	1,364,000	1,339,152	98%
2016	$12,206,008	$10,822,444	89%	204,880	283,570	138%	55.32	71.81	130%	1,050,000	1,202,664	115%



DEP My Home Energy Reports

My Home Energy Report Program Budget, Savings & Number of Measures

	Expenditures			Energy Savings			Demand Savings			Participants		
Program Year	Budget	Actual	%	Budget	Actual	%	Budget	Actual	%	Budget	Actual	%
2018	$6,810,235	$7,687,891	113%	132,895	122,685	92%	36.11	20.78	58%	673,400	9,578,379	1422%
2017	$8,763,955	$6,753,153	77%	133,917	117,852	88%	36.39	19.96	55%	682,300	8,775,108	1286%
2016	$8,770,681	$5,890,093	67%	133,917	102,921	77%	36.39	16.91	46%	682,300	7,909,262	1159%
2019	$7,994,059	$6,746,551	84%	119,273	154,602	130%	20.01	54.25	271%	797,000	769,490	97%



EE in Education

Energy Efficiency Education[1]

$ in millions, rounded	Vintage 2019 As Filed	Vintage 2019 YTD December 31, 2019	% of Target
NPV of Avoided Cost	$2.6	$2.5	98%
Program Cost	$2.1	$1.7	80%
MW	1.3	0.8	63%
MWH	5,701.5	6,713.8	118%
Units	26,705	24,785	93%

1) Values are reflected at the system level.

2019 YTD Results	Annual Forecast	Actual at 12/31/2019	Variation
Savings (MWH)	2,315	3,284	969
Savings (MW)	0.98	0.39	-0.59
Participants		9,887	
2019 Program Expenses		$745,829	

EE in Education

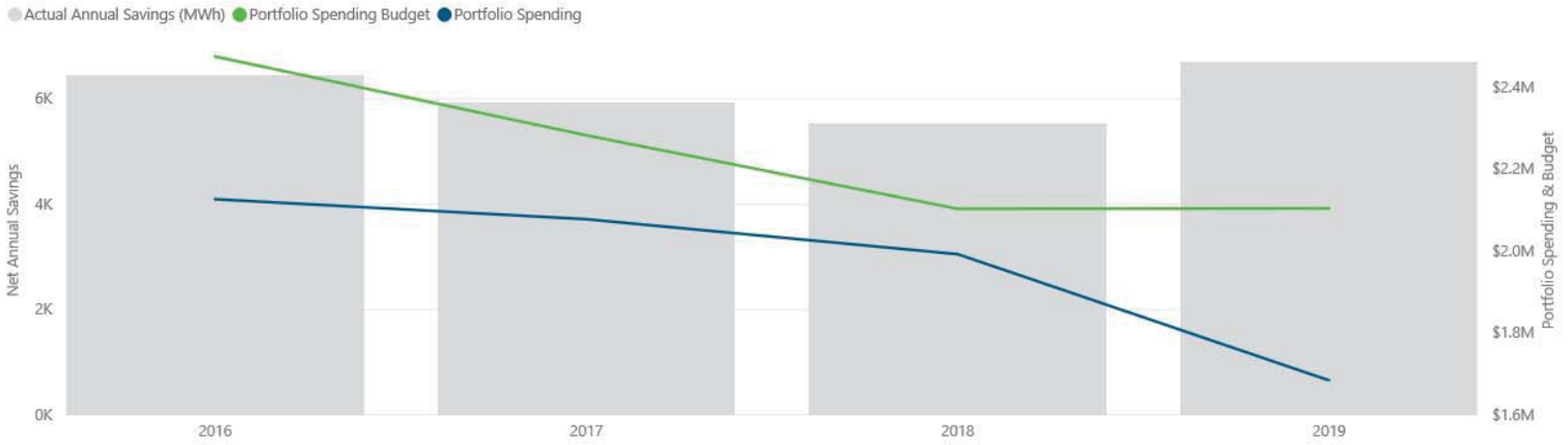
DEP	
NC - PMID 9054	
Number of Schools	193
Number of Performances	316
Number of Students	69,202
Number of Kits	8,661
SC - PMID 9055	
Number of Schools	54
Number of Performances	87
Number of Students	17,677
Number of Kits	1,226
Total	
Number of Schools	247
Number of Performances	403
Number of Students	86,879
Number of Kits	9,887

DEC	
NC - PMID 3627	
Number of Schools	455
Number of Performances	727
Number of Students	155,286
Number of Kits	19,855
SC - PMID 3629	
Number of Schools	134
Number of Performances	192
Number of Students	42,992
Number of Kits	4,930
Total	
Number of Schools	589
Number of Performances	919
Number of Students	198,278
Number of Kits	24,785

DEC EE in Education

Energy Efficiency Education Program Budget, Savings & Number of Measures

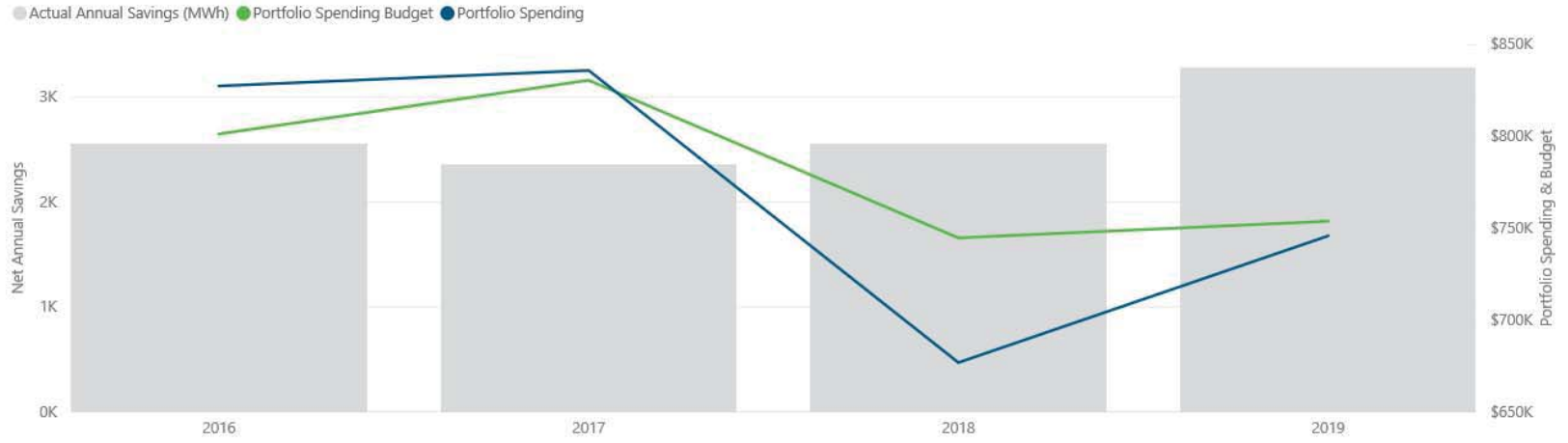
	Expenditures			Energy Savings			Demand Savings			Participants		
Program Year	Budget	Actual	%	Budget	Actual	%	Budget	Actual	%	Budget	Actual	%
2016	$2,474,928	$2,126,509	86%	6,580	6,441	98%	0.69	1.51	219%	26,250	30,170	115%
2017	$2,282,458	$2,077,611	91%	5,604	5,932	106%	1.32	1.39	106%	26,250	27,785	106%
2019	$2,104,087	$1,684,083	80%	5,702	6,714	118%	1.34	0.84	63%	26,705	24,785	93%
2018	$2,103,036	$1,992,260	95%	5,604	5,531	99%	1.32	0.97	73%	26,250	22,901	87%



DEP EE in Education

Energy Education Program for Schools Program Budget, Savings & Number of Measures

Program Year	Expenditures Budget	Expenditures Actual	Expenditures %	Energy Savings Budget	Energy Savings Actual	Energy Savings %	Demand Savings Budget	Demand Savings Actual	Demand Savings %	Participants Budget	Participants Actual	Participants %
2019	$753,793	$745,829	99%	2,315	3,284	142%	0.98	0.39	40%	8,952	9,887	110%
2016	$801,351	$827,497	103%	1,998	2,554	128%	0.20	1.08	546%	8,800	9,877	112%
2017	$830,606	$835,991	101%	1,998	2,354	118%	0.20	1.00	503%	8,800	9,104	103%
2018	$744,749	$676,815	91%	1,997	2,563	128%	0.20	0.77	387%	8,798	9,013	102%



Home Energy House Call

Energy Assessments[1]

$ in millions, rounded	Vintage 2019 As Filed	Vintage 2019 YTD December 31, 2019	% of Target
NPV of Avoided Cost	**$4.2**	**$4.4**	**105%**
Program Cost	**$3.0**	**$3.2**	**107%**
MW	**1.0**	**0.9**	**91%**
MWH	**6,542.9**	**7,886.9**	**121%**
Units	**34,304**	**61,692**	**180%**

1) Values are reflected at the system level.
2) Units represent number of measures, and do include additional LEDs.

2019 YTD Results	Annual Forecast	Actual at 12/31/2019	Variation
Savings (MWH)	2,565	7,834	5,269
Savings (MW)	0.43	0.94	0.51
Participants		41,226	
2019 Program Expenses		$2,109,106	

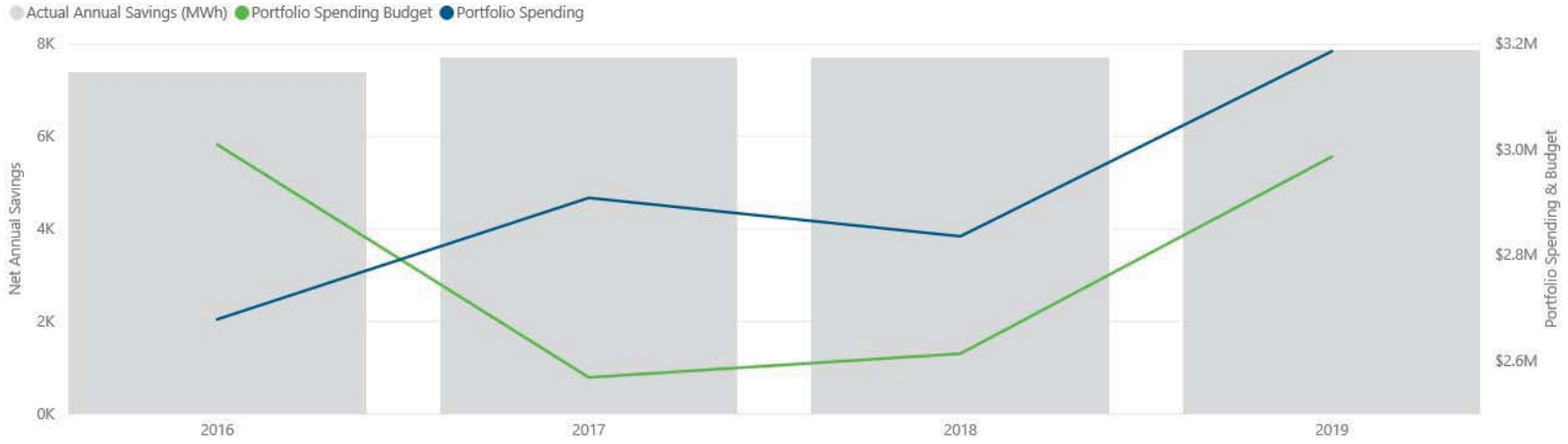
Home Energy House Call

Measure	State	NC	SC
Audit	DEC	7,529	2,817
Additional Bulb		31,016	12,119
Bathroom Aerator		1,663	639
Pipewrap		4,887	1,062
Total		45,095	16,637
Audit	DEP	5,948	779
Additional Bulb		25,352	3,181
Bathroom Aerator		1,879	168
Pipewrap		3,213	706
Total		36,392	4,834

DEC Home Energy House Call

Energy Assessments Program Budget, Savings & Number of Measures

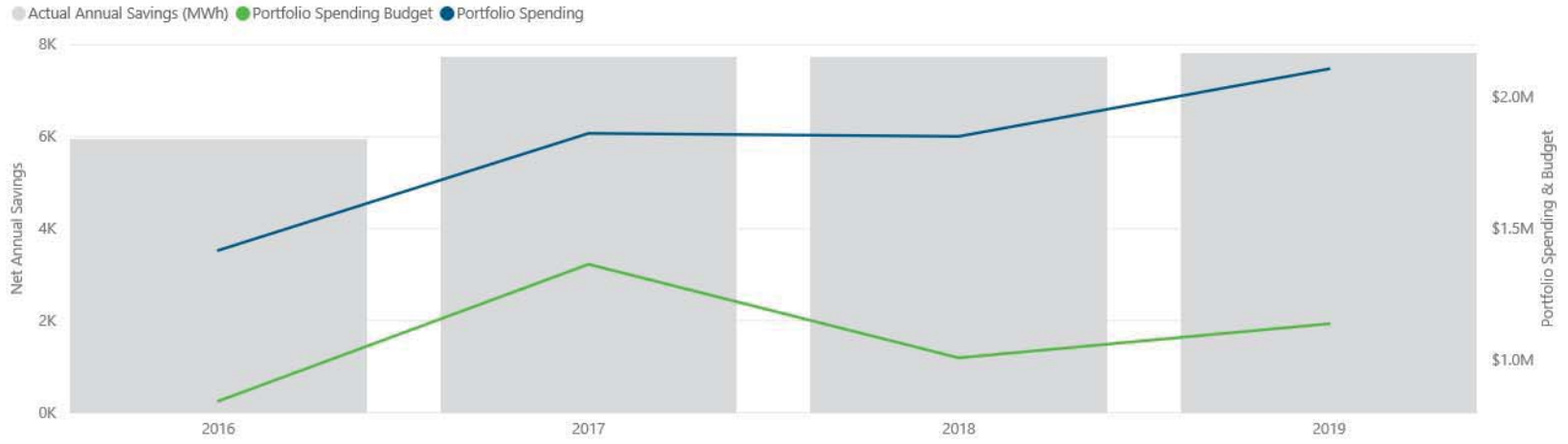
	Expenditures			Energy Savings			Demand Savings			Participants		
Program Year	Budget	Actual	%	Budget	Actual	%	Budget	Actual	%	Budget	Actual	%
2019	$2,987,118	$3,186,888	107%	6,543	7,887	121%	1.04	0.95	91%	34,304	61,692	180%
2018	$2,613,893	$2,836,229	109%	7,436	7,717	104%	1.14	0.93	81%	8,440	55,978	663%
2017	$2,568,858	$2,909,098	113%	7,923	7,721	97%	0.98	1.04	106%	8,038	52,546	654%
2016	$3,010,149	$2,678,893	89%	7,547	7,389	98%	0.93	1.07	114%	7,656	28,853	377%



DEP Home Energy House Call

Residential Energy Assessments Program Budget, Savings & Number of Measures

	Expenditures			Energy Savings			Demand Savings			Participants		
Program Year	Budget	Actual	%	Budget	Actual	%	Budget	Actual	%	Budget	Actual	%
2019	$1,138,481	$2,109,106	185%	2,565	7,834	305%	0.43	0.94	220%	13,672	41,226	302%
2017	$1,365,004	$1,863,486	137%	3,132	7,734	247%	0.52	0.93	178%	25,375	38,090	150%
2018	$1,008,625	$1,851,965	184%	2,720	7,752	285%	0.45	0.94	206%	22,036	37,923	172%
2016	$843,942	$1,417,924	168%	1,282	5,943	464%	0.21	0.72	334%	10,385	27,614	266%



Save Energy and Water Kits**

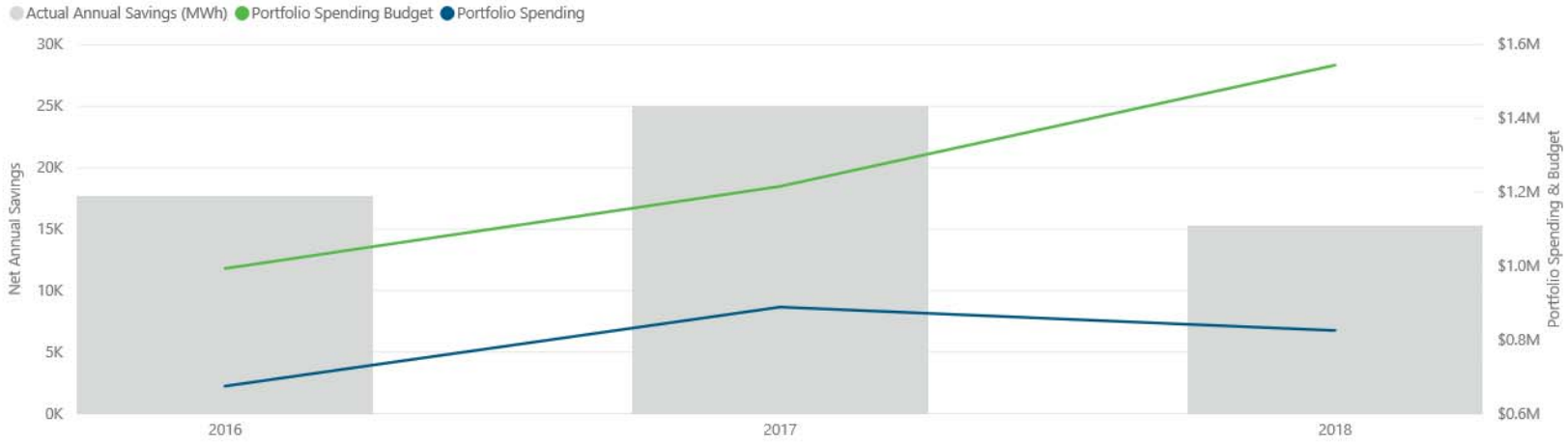
2019 YTD Results	Annual Forecast	Actual at 12/31/2019	Variation
Savings (MWH)	30,940	16,709	-14,231
Savings (MW)	8.91	5.05	-3.87
Participants		253,098	
2019 Program Expenses		$1,226,733	

Save Energy and Water	
Jurisdiction	Kits
DEC - NC	31,961
DEC - SC	11,075
DEP - NC	21,929
DEP - SC	3,814
Grand Total	68,779

DEP Save Energy and Water Kits

Save Energy and Water Kit Program Budget, Savings & Number of Measures

Program Year	Expenditures			Energy Savings			Demand Savings			Participants		
	Budget	Actual	%	Budget	Actual	%	Budget	Actual	%	Budget	Actual	%
2017	$1,216,177	$888,869	73%	15,667	25,021	160%	1.25	8.38	668%	316,437	463,854	147%
2016	$993,420	$674,538	68%	12,758	17,672	139%	1.02	5.91	579%	257,688	325,146	126%
2018	$1,544,762	$825,279	53%	21,484	15,252	71%	1.72	5.06	294%	432,591	276,327	64%



Free LEDs**

- Offered in DEC as part of EE Appliances and Devices Program
- 451,000 orders for 5.6 million bulbs in 2019
- The Free LED program is scheduled to discontinue in Duke Energy Carolinas in 2020

Free LEDs (DEC Only)		
State	Participation (Bulbs)	Split
NC	4,440,368	77%
SC	1,361,532	23%
Total	5,801,900	100%

Programs with Participant Costs

Energy Efficient Appliances and Devices

Energy Efficient Appliances and Devices[1]

$ in millions, rounded	Vintage 2019 As Filed	Vintage 2019 YTD December 31, 2019	% of Target
NPV of Avoided Cost	$52.1	$102.1	196%
Program Cost	$21.7	$41.4	190%
MW	16.7	31.8	190%
MWH	97,320.5	187,351.7	193%
Units	3,997,670	9,893,466	247%

1) Values are reflected at the system level.

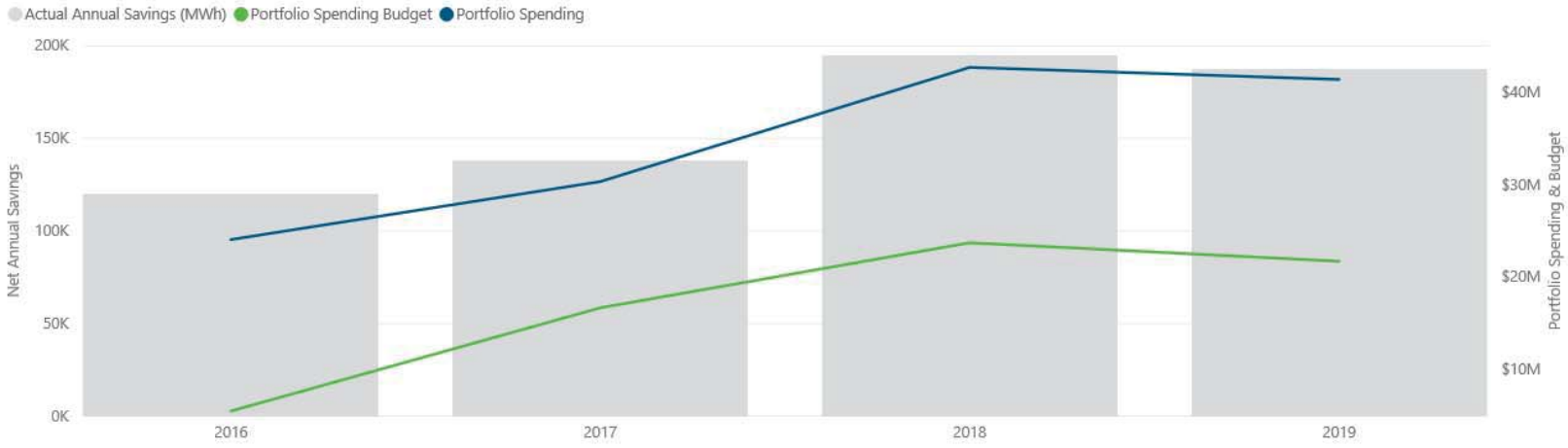
DEC NC	76%	DEP NC	93%
DEC SC	24%	DEP SC	7%

- For DEC, includes Free LEDs, SEWK, Retail Lighting, Specialty Lighting and Online Store
- 43,578 orders thru OLS for 331,095 bulbs; 11,724 smart thermostats; 3,553 smart strips; and 220 water measures, 639 LED fixtures
- Over 99 percent of customers accessed OLS via the public website, while 1 percent accessed OLS by logging into their OLS account.

DEC Energy Efficient Appliances and Devices

Energy Efficient Appliances and Devices Program Budget, Savings & Number of Measures

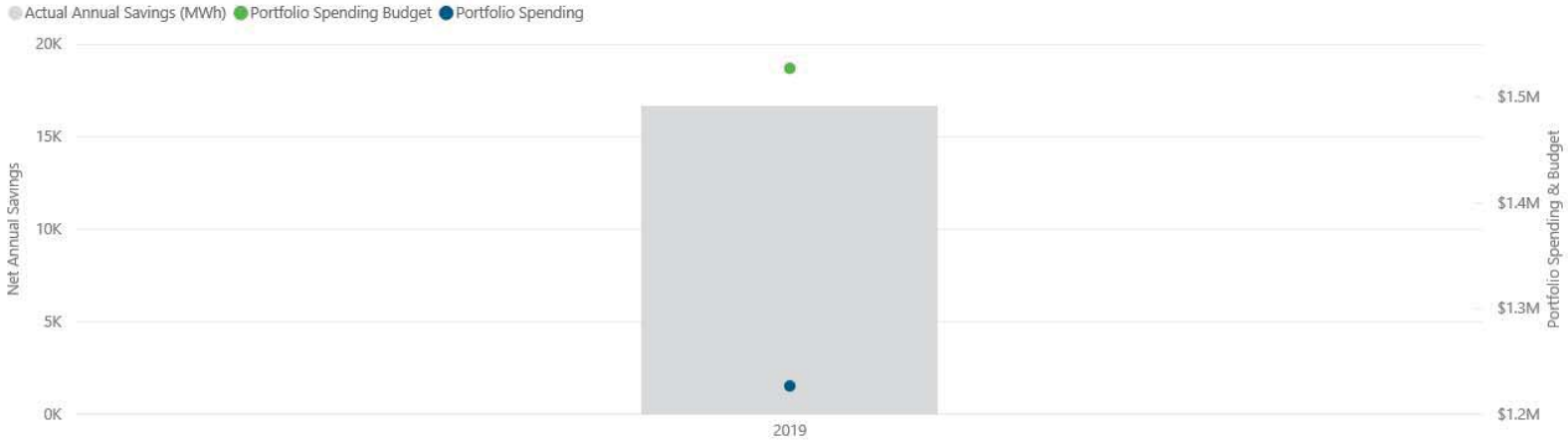
	Expenditures			Energy Savings			Demand Savings			Participants		
Program Year	Budget	Actual	%	Budget	Actual	%	Budget	Actual	%	Budget	Actual	%
2018	$23,729,947	$42,687,244	180%	97,729	195,213	200%	11.73	32.80	280%	3,533,486	10,242,946	290%
2019	$21,726,700	$41,380,987	190%	97,321	187,352	193%	16.73	31.80	190%	3,997,670	9,893,466	247%
2017	$16,694,730	$30,340,728	182%	63,591	137,960	217%	8.14	24.61	302%	2,544,764	6,819,189	268%
2016	$5,528,158	$24,069,774	435%	36,348	120,226	331%	4.06	14.52	357%	955,750	3,868,812	405%



DEP Appliances and Devices

Appliances and Devices Program Budget, Savings & Number of Measures

	Expenditures			Energy Savings			Demand Savings			Participants		
Program Year	Budget	Actual	%	Budget	Actual	%	Budget	Actual	%	Budget	Actual	%
2019	$1,527,511	$1,226,733	80%	30,940	16,709	54%	8.91	5.05	57%	452,400	253,098	56%



Retail Lighting

2019 YTD Results	Annual Forecast	Actual at 12/31/2019	Variation
Savings (MWH)	31,505	37,390	5,886
Savings (MW)	5.81	6.16	0.35
Participants		2,650,367	
2019 Program Expenses		$13,417,185	

- DEC Retail Lighting is included in EE Appliances and Devices Program.
- DEP had 17 lighting retail channels actively participating --the top 5 retail channels account for 78% of the sales
- DEC had 8 lighting retail channels actively participating --the top 3 retail channels account for 70% of the sales

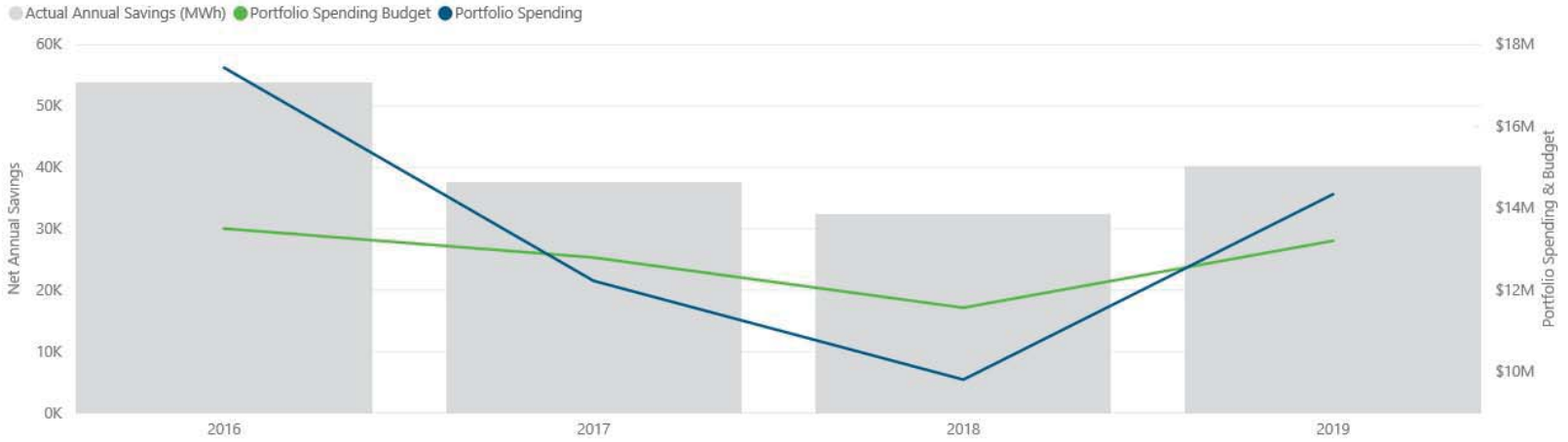
Retail Lighting Program (DEC)		
State	Participation (Bulbs)	Split
DEC (NC)	2,683,079	77%
DEC (SC)	793,363	23%
Total	3,476,442	100%

Retail Lighting Program (DEP)		
State	Participation (Bulbs)	Split
DEP (NC)	2,281,045	86%
DEP (SC)	369,322	14%
Total	2,650,367	100%

DEP Retail Lighting

Energy Efficient Lighting Program Budget, Savings & Number of Measures

	Expenditures			Energy Savings			Demand Savings			Participants		
Program Year	Budget	Actual	%	Budget	Actual	%	Budget	Actual	%	Budget	Actual	%
2016	$13,508,880	$17,441,878	129%	68,441	53,830	79%	11.23	8.82	79%	2,501,909	3,244,448	130%
2019	$13,209,118	$14,346,463	109%	31,505	40,249	128%	5.81	6.59	113%	1,945,783	2,754,133	142%
2017	$12,799,466	$12,229,222	96%	63,371	37,551	59%	10.40	6.82	66%	2,251,730	2,520,381	112%
2018	$11,573,219	$9,815,496	85%	29,251	32,403	111%	4.92	5.98	121%	1,868,674	2,147,254	115%



Smart $aver Residential

Residential - Smart $aver Energy Efficiency Program[1]

$ in millions, rounded	Vintage 2019 As Filed	Vintage 2019 YTD December 31, 2019	% of Target
NPV of Avoided Cost	$4.5	$7.1	157%
Program Cost	$4.8	$7.4	154%
MW	1.3	2.0	157%
MWH	5,130.7	7,329.1	143%
Units	9,630	25,852	268%

1) Values are reflected at the system level.

2019 YTD Results	Annual Forecast	Actual at 12/31/2019	Variation
Savings (MWH)	4,184	6,756	2,572
Savings (MW)	1.11	1.86	0.75
Participants		21,965	
2019 Program Expenses		$6,397,527	

Smart $aver Residential

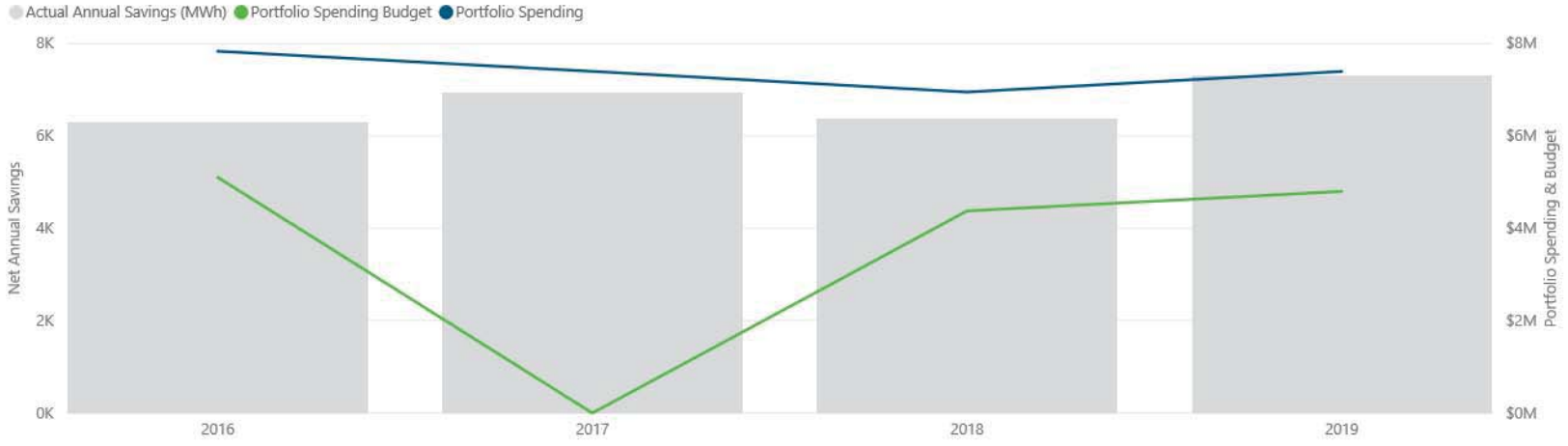
- The Referral Channel generated over 15,668 customer referrals during 2019 with a 95% customer satisfaction rating

NC		SC	
DEC	DEP	DEC	DEP
22,645	21,209	3,979	790
46%	44%	8%	2%
Total NC 43,854		Total SC 4,769	

DEC Smart $aver HVAC

HVAC Energy Efficiency Program Budget, Savings & Number of Measures

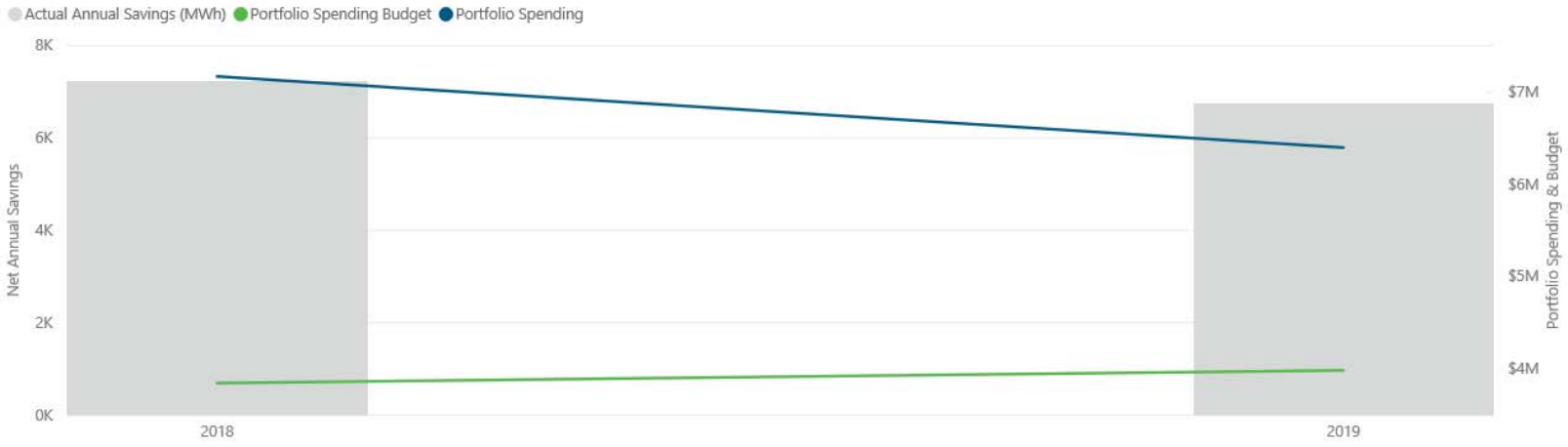
	Expenditures			Energy Savings			Demand Savings			Participants		
Program Year	Budget	Actual	%	Budget	Actual	%	Budget	Actual	%	Budget	Actual	%
2017	$0	$7,403,327	0%	0	6,955	0%	0.00	1.85	0%	0	27,311	0%
2019	$4,802,289	$7,400,669	154%	5,131	7,329	143%	1.29	2.03	157%	9,630	25,852	268%
2018	$4,379,521	$6,955,146	159%	5,360	6,367	119%	1.58	1.64	104%	9,480	25,293	267%
2016	$5,107,181	$7,839,566	154%	3,365	6,295	187%	1.53	2.46	161%	9,986	19,475	195%



DEP Smart $aver

Residential Smart$aver Program Budget, Savings & Number of Measures

	Expenditures			Energy Savings			Demand Savings			Participants		
Program Year	Budget	Actual	%	Budget	Actual	%	Budget	Actual	%	Budget	Actual	%
2018	$3,847,421	$7,168,833	186%	3,134	7,229	231%	1.14	1.80	158%	9,260	24,562	265%
2019	$3,985,069	$6,397,527	161%	4,184	6,756	161%	1.11	1.86	168%	8,147	21,965	270%



Residential New Construction

2019 YTD Results	Annual Forecast	Actual at 12/31/2019	Variation
Savings (MWH)	16,447	16,337	-109
Savings (MW)	7.10	4.66	-2.44
Participants		13,165,685	
2019 Program Expenses		$15,080,405	

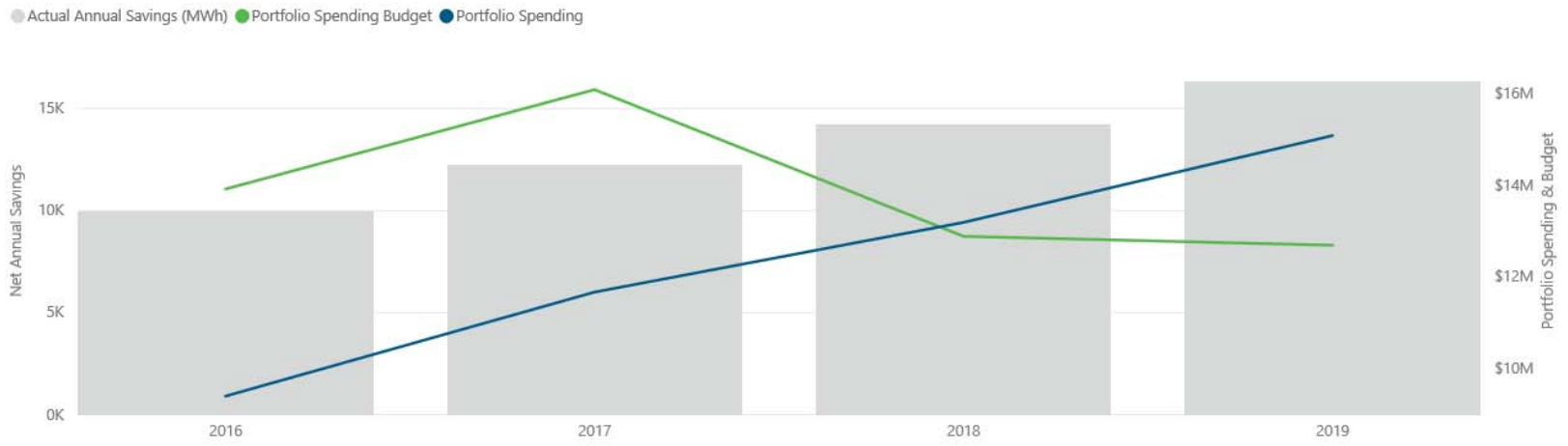
- Total, 580 builders and 28 approved raters registered

Measure Qty			
	DEP (NC)	DEP (SC)	Grand Total
2019	5941	2	5943

DEP Residential New Construction

Residential New Construction Program Budget, Savings & Number of Measures

	Expenditures			Energy Savings			Demand Savings			Participants		
Program Year	Budget	Actual	%	Budget	Actual	%	Budget	Actual	%	Budget	Actual	%
2019	$12,691,351	$15,080,405	119%	16,447	16,337	99%	7.10	4.66	66%	11,891,674	13,165,685	111%
2018	$12,886,524	$13,189,949	102%	16,048	14,263	89%	6.95	5.44	78%	11,341,393	11,275,657	99%
2017	$16,082,178	$11,671,724	73%	10,075	12,246	122%	4.36	5.27	121%	4,750	9,732,077	204886 %
2016	$13,917,269	$9,405,615	68%	8,955	9,955	111%	3.87	4.36	113%	4,500	5,700,623	126681 %



Demand Response

Energy Wise Home

2019 YTD Results	Annual Forecast	Actual at 12/31/2019	Variation
Savings (MWH)	N/A	N/A	N/A
Savings (MW)	418.15	422.12	3.97
Participants		422.12	
2019 Program Expenses		$14,607,732	

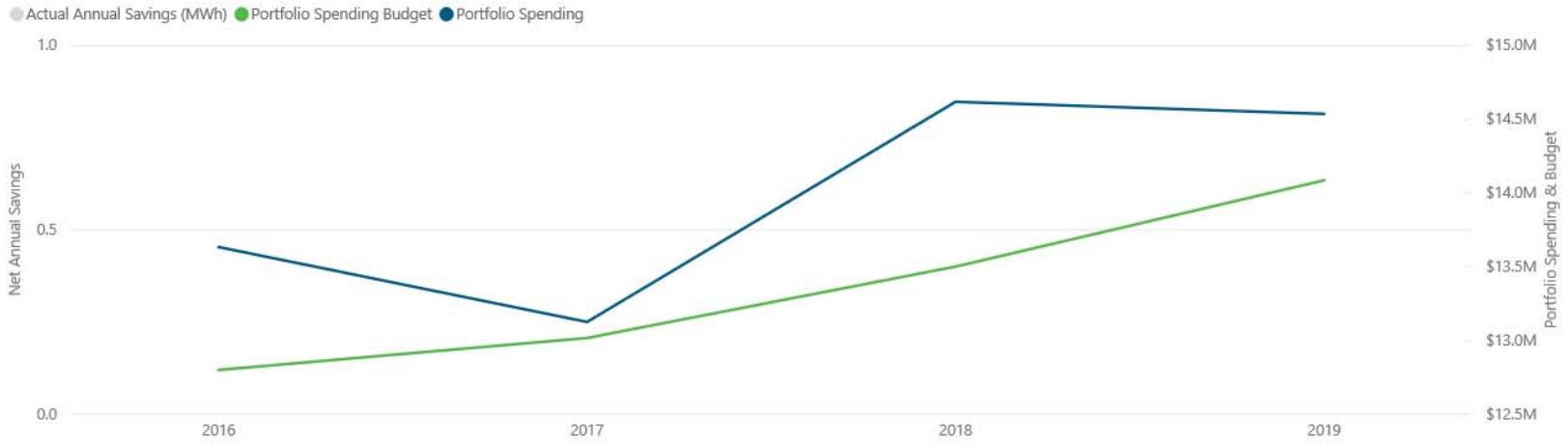
MW Savings at the meter include Summer MW for AC participants and Winter MW for Heat Strip and Water Heater Participants

- 182,000 participants and full shed load impacts of 376 MW summer and 14.5 MW winter at the meter
- Bring Your Own Thermostat Program launched in mid-December—
  - DEC ~3,700 Customers, 5,400 devices
  - DEP ~2,900 Customers, 4,300 devices

DEP EnergyWise Home

EnergyWise Program Budget, Savings & Number of Measures

	Expenditures			Energy Savings			Demand Savings			Participants		
Program Year	Budget	Actual	%	Budget	Actual	%	Budget	Actual	%	Budget	Actual	%
2017	$13,016,514	$13,125,314	101%	0	0	0%	22.04	33.43	152%	11,066	20,506	185%
2016	$12,799,495	$13,633,666	107%	0	0	0%	22.81	34.06	149%	11,433	18,465	162%
2019	$14,086,536	$14,537,464	103%	0	0	0%	27.12	31.09	115%	14,820	15,978	108%
2018	$13,501,070	$14,619,512	108%	0	0	0%	29.08	29.48	101%	14,985	15,602	104%



Power Manager

PowerManager[1]

$ in millions, rounded	Vintage 2019 As Filed	Vintage 2019 YTD December 31, 2019	% of Target
NPV of Avoided Cost	$60.8	$69.8	115%
Program Cost	$14.1	$13.4	95%
MW[2]	534.4	568.2	106%
MWH	0.0	N/A	-
Units[3]	503,131	535,704	106%

Notes on Tables:

1) Values are reflected at the system level.

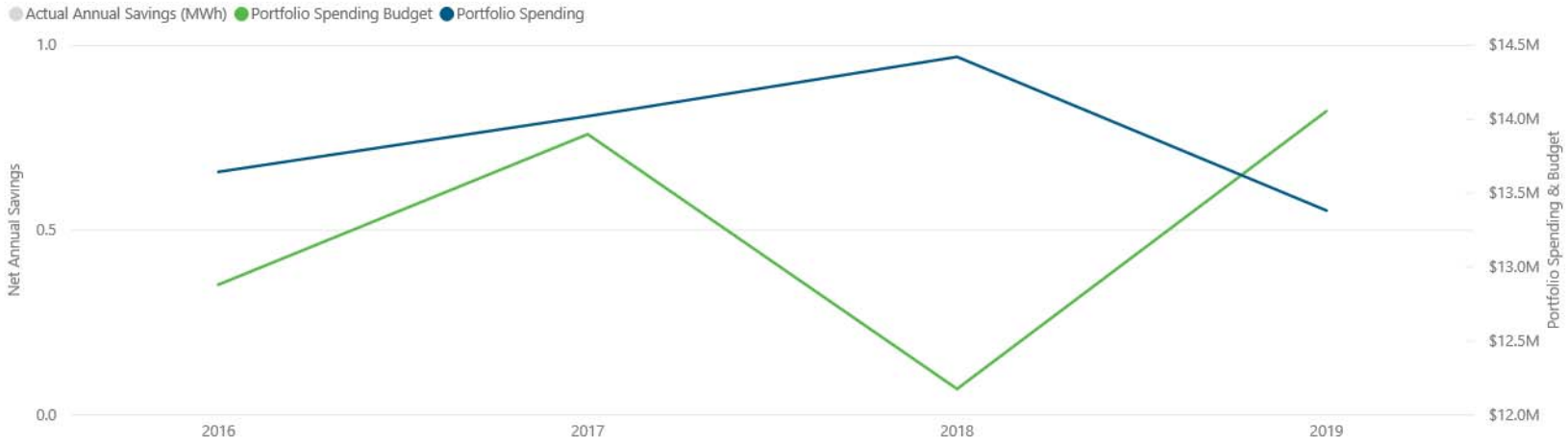
State & Type	
NC - CAN	216,490
SC - CAN	69,983
DEC - CAN	286,473
NC - Customers	180,513
SC - Customers	57,544
DEC - Customers	238,057

- At year-end, there were
  - 238,057 customers--NC: 180,513 and SC: 57,544
  - 286,473 air conditioners--NC: 216,490 and SC: 69,983
- net increases of 8,682 customers (+3.8%) and 10,794 air conditioners (+3.9%).

DEC Power Manager

PowerManager Program Budget, Savings & Number of Measures

	Expenditures			Energy Savings			Demand Savings			Participants		
Program Year	Budget	Actual	%	Budget	Actual	%	Budget	Actual	%	Budget	Actual	%
2019	$14,055,575	$13,383,639	95%	0	0	0%	534.42	568.24	106%	503,131	534,967	106%
2018	$12,175,733	$14,423,610	118%	0	0	0%	503.30	533.51	106%	473,837	502,271	106%
2017	$13,899,748	$14,021,500	101%	0	0	0%	502.97	501.12	100%	473,525	471,780	100%
2016	$12,881,566	$13,644,970	106%	0	0	0%	504.19	455.39	90%	474,675	428,731	90%



ISOP Coordination with Carolinas Collaborative

March 19, 2020





DUKE ENERGY®

BUILDING A **SMARTER** ENERGY FUTURE℠

ISOP & Carolinas Collaborative partnership opportunity

The Ask: Can the Collaborative help ISOP to assess potential of EE and Customer Programs to be used as non-traditional solutions?

- Current regulatory treatment and policies are not designed to recognize localized EE/Customer Program benefits (or costs)
- Can we leverage Collaborative to gather feedback and address opportunities to improve EE/Customer Program analysis and rate design?
- Development of “Use Cases” is an effective way to identify and address barriers

Timeline of Strategic Carolinas Stakeholder Activities

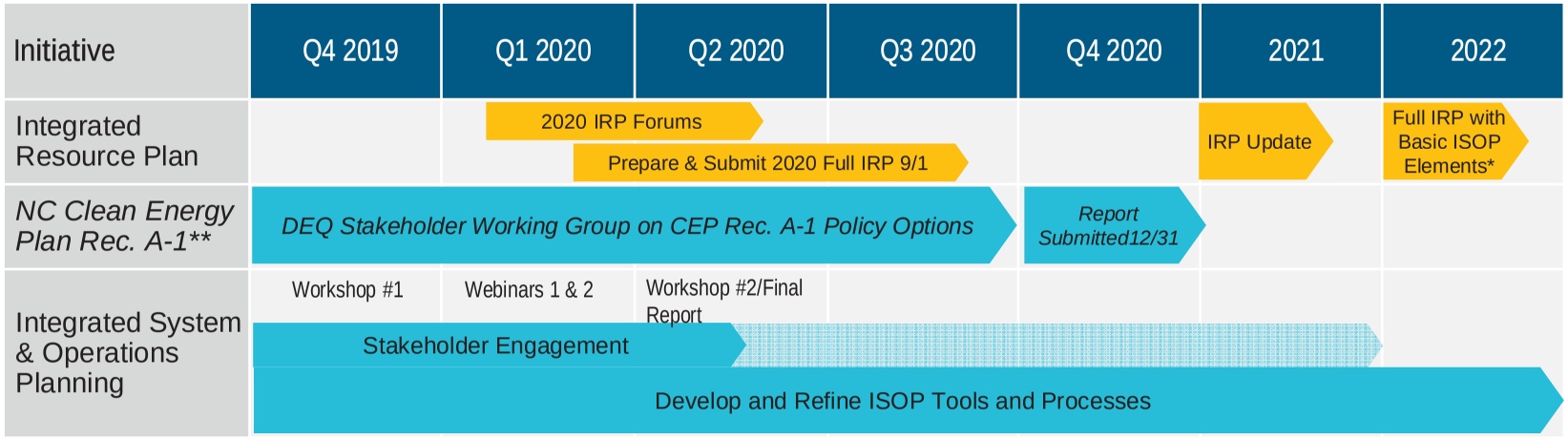
The path forward for the Carolinas' energy future will continue to evolve iteratively through dialogues with diverse stakeholders, and state-mandated clean energy requirements.

Commitments

Duke Energy's 2020 Carolinas IRP will reflect the company's updated climate goals.

Future IRPs will continue to evolve, reflecting changes in market dynamics and state policies, including any next steps from NC's Clean Energy Plan and SC's Act 62.

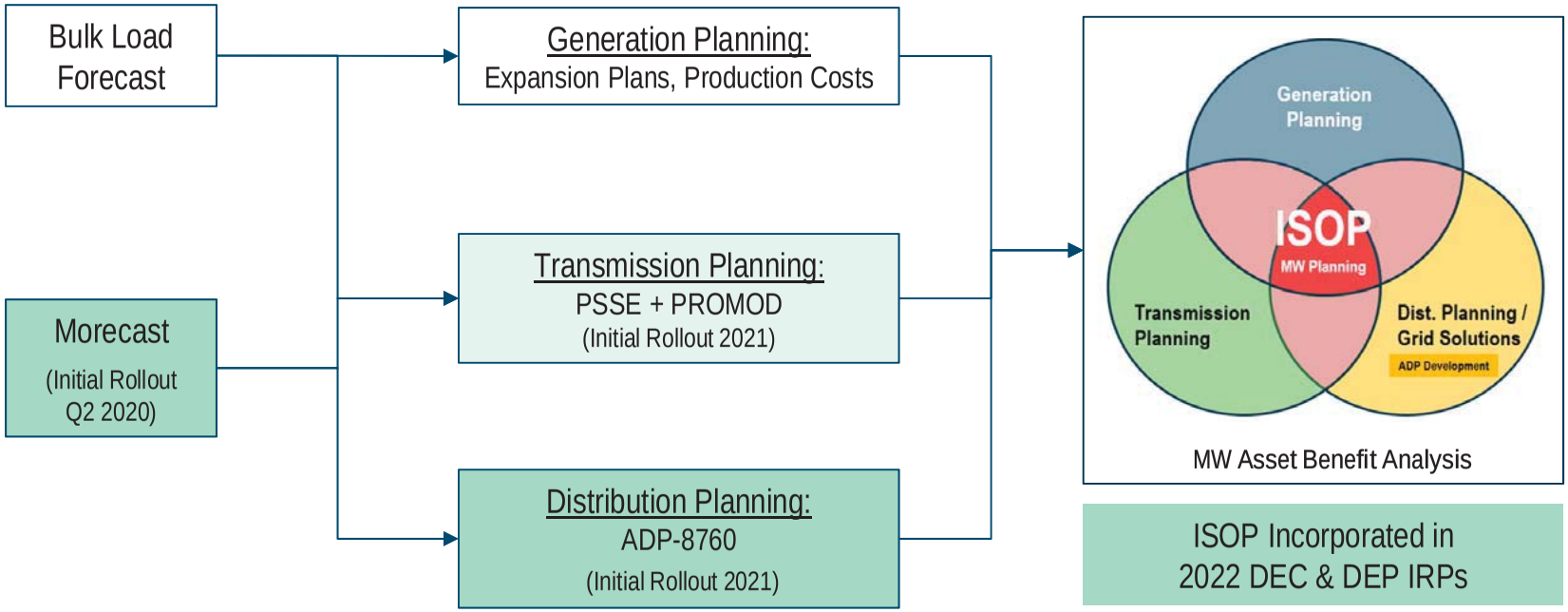
Duke Energy's goal is to implement the basic elements of ISOP in the 2022 Carolinas IRP.



*Goal

***A-1 directs NC DEQ to develop a report on potential carbon reduction policies.*

ISOP Development Timeline



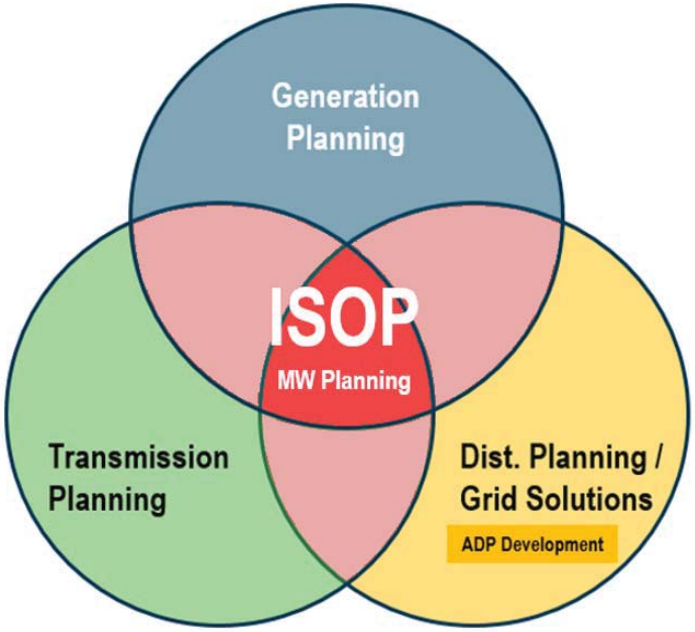
Stakeholders are invited to visit the Reference Information Portal to learn more about the ISOP vision (https://www.duke-energy.com/isop)

Non-traditional Solution Evaluations

The initial screening phase …

ISOP Development for Non-Traditional Solutions Evaluations

- ISOP is developing new tools, processes and methodologies to screen for and evaluate non-traditional solutions.
- Simulations and case studies are being used to refine the new processes and help identify gaps in approach.
- This iterative development approach is focused on integrating these new processes into the 2022 Carolinas Integrated Resource Plans.
- Today's discussion will focus on high-level screening processes which help identify NTS candidates for more detailed analysis and review.
- *The information provided in this presentation reflects work in progress and will change as development progresses.*



Traditional Solutions

Historically, growth in customer demand for electricity was solved through traditional infrastructure investments. These investments include:

- Generating stations for system capacity or energy needs
- Transmission or distribution lines, substations, and associated equipment to address issues on the transmission system or overloads on distribution circuits
- Additional feeders or small generators to address reliability for critical or remote circuits with a high outage history

Non-Traditional Solutions (NTS)

Non-traditional solutions (NTS) are alternative methods of solving utility system issues which would typically be addressed with traditional infrastructure investments

Non-traditional solutions may also be referred to as non-wires alternatives (NWAs)

NTS/NWAs can include:

- *Demand Response/Load Management (DR)*
- *Distributed Generation (DG)*
- *Energy Efficiency (EE)*
- *Electrical Storage Systems (ESS - Batteries)*
- *Pumped Storage and Thermal Storage Systems*
- *Rate Design*

Non-Traditional Solution Evaluations

Screening is the first cut in a complex planning process to help identify alternatives for further review.

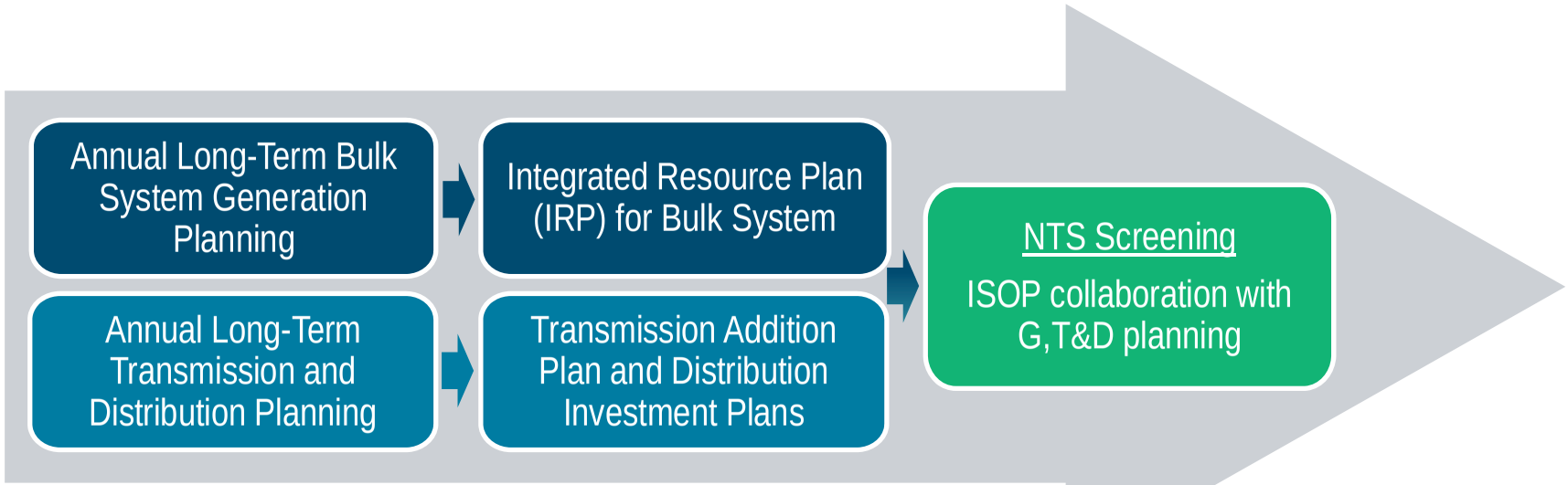
Some of the building blocks for NTS economic and technical potential screening assessments:

- Establish forecasts for system load and energy delivery requirements
  - Morecast, traditional circuit level and bulk system forecasts
- Characterize traditional and non-traditional solutions to enable comparison of alternatives
  - Technology characterization studies provide cost and performance attributes for use in planning
- Estimate values for bulk system services to support G, T and D planners
  - Proxy values for system capacity services and energy arbitrage potential
  - Proxy values for system support services including reserves and ancillary services
- Characterize additional potential value for deferral of traditional T or D investments

Each of these steps involves new processes and tools that are being developed as part of ISOP

Non-Traditional Solution Evaluations

High-level NTS Screening



Needs Assessments:
Bulk System Capacity & Energy Grid Needs Assessment

Identify Traditional Utility Solutions

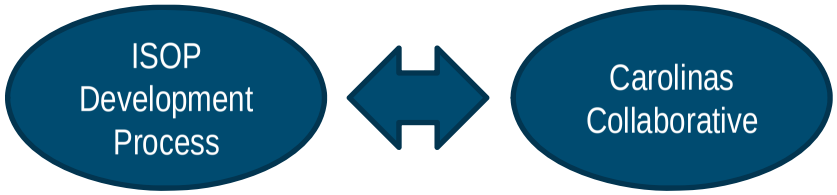
Evaluate technical and economic suitability of Non-Traditional Solutions

The process depicted focuses on the initial screening phase for traditional and non-traditional solutions

Q&A

Discussion questions

- Is there a practical way for ISOP to engage with the Collaborative?
- What are the practical limitations for counting on EE/Customer Programs to defer Distribution and Transmission investments?
- Which use cases are you most interested in / are most important to you?



*BUILDING A **SMARTER** ENERGY FUTURE℠*

DUKE ENERGY®

Non-Residential Program Updates

Prescriptive Programs

Small Business Energy Saver

Small Business Energy Saver[1]

$ in millions, rounded	Vintage 2019 As Filed	Vintage 2019 YTD December 31, 2019	% of Target
NPV of Avoided Cost	$37.9	$25.7	68%
Program Cost	$14.6	$11.4	78%
MW	14.5	9.2	63%
MWH	75,258.1	53,674.2	71%
Units[2]	61,700,000	51,421,356	83%

1) Values are reflected at the system level.

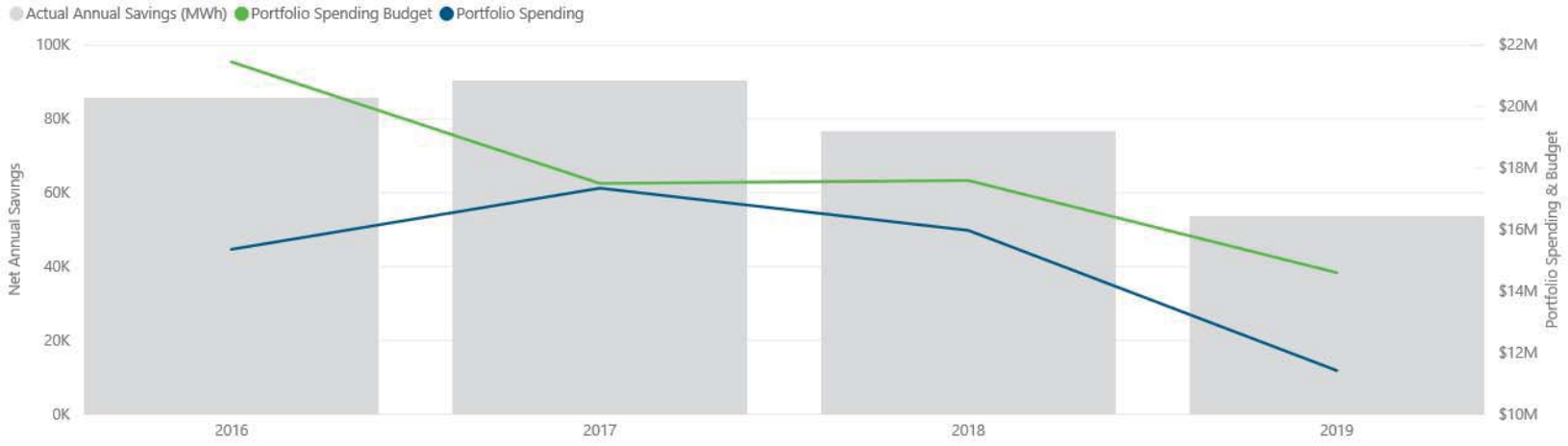
2) Units reflect gross kWh.

2019 YTD Results	Annual Forecast	Actual at 12/31/2019	Variation
Savings (MWH)	46,011	34,745	-11,266
Savings (MW)	8.95	5.82	-3.13
Participants		33,301,332	
2019 Program Expenses		$7,346,426	

DEC Small Business Energy Saver

Small Business Energy Saver Program Budget, Savings & Number of Measures

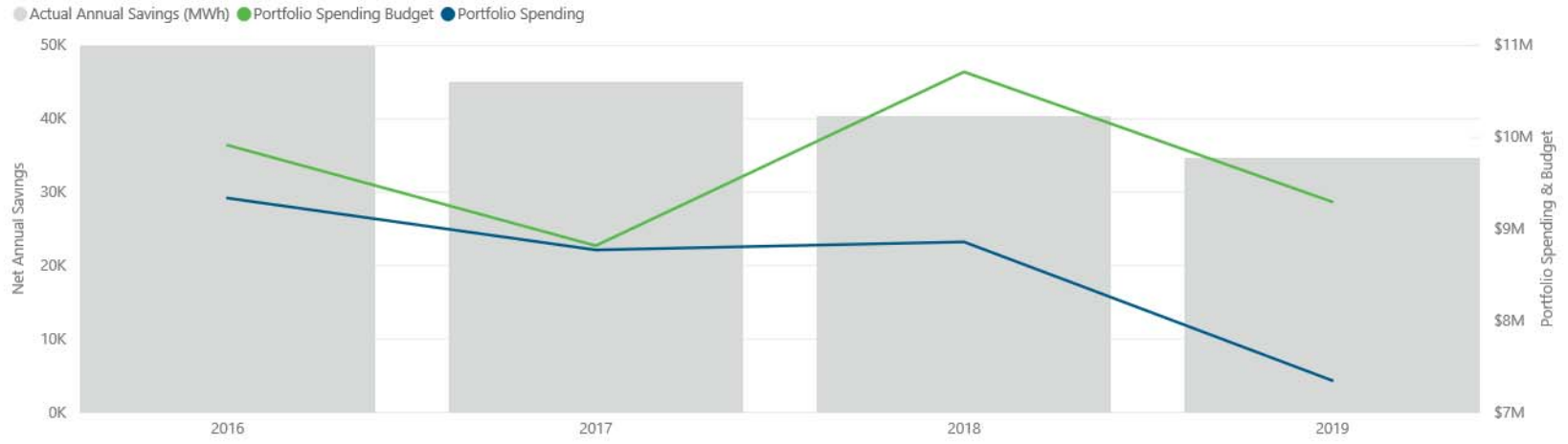
	Expenditures			Energy Savings			Demand Savings			Participants		
Program Year	Budget	Actual	%	Budget	Actual	%	Budget	Actual	%	Budget	Actual	%
2017	$17,505,451	$17,350,972	99%	61,629	90,297	147%	12.84	17.26	134%	65,000,000	79,986,749	123%
2018	$17,602,867	$15,977,993	91%	93,136	76,697	82%	17.12	13.37	78%	75,800,000	73,493,029	97%
2016	$21,459,213	$15,360,852	72%	68,899	85,688	124%	16.60	16.11	97%	72,805,295	70,239,423	96%
2019	$14,602,066	$11,418,264	78%	75,258	53,674	71%	14.50	9.20	63%	61,700,000	51,421,356	83%



DEP Small Business Energy Saver

Small Business Energy Saver Program Budget, Savings & Number of Measures

	Expenditures			Energy Savings			Demand Savings			Participants		
Program Year	Budget	Actual	%	Budget	Actual	%	Budget	Actual	%	Budget	Actual	%
2016	$9,913,059	$9,336,274	94%	39,581	49,979	126%	7.55	8.67	115%	40,500,000	42,784,494	106%
2017	$8,816,714	$8,770,755	99%	35,281	45,011	128%	6.73	8.50	126%	36,100,000	40,204,550	111%
2018	$10,712,026	$8,858,213	83%	53,576	40,298	75%	9.94	6.67	67%	44,500,000	38,604,480	87%
2019	$9,294,966	$7,346,426	79%	46,011	34,745	76%	8.95	5.82	65%	38,500,000	33,301,332	86%



Smart $aver Prescriptive

Non Residential Smart Saver Prescriptive[1]

$ in millions, rounded	Vintage 2019 As Filed	Vintage 2019 YTD December 31, 2019	% of Target
NPV of Avoided Cost	$84.3	$103.6	123%
Program Cost	$27.8	$23.7	85%
MW	23.6	30.0	127%
MWH	160,730.5	158,072.3	98%
Units	14,784,792	8,510,436	58%

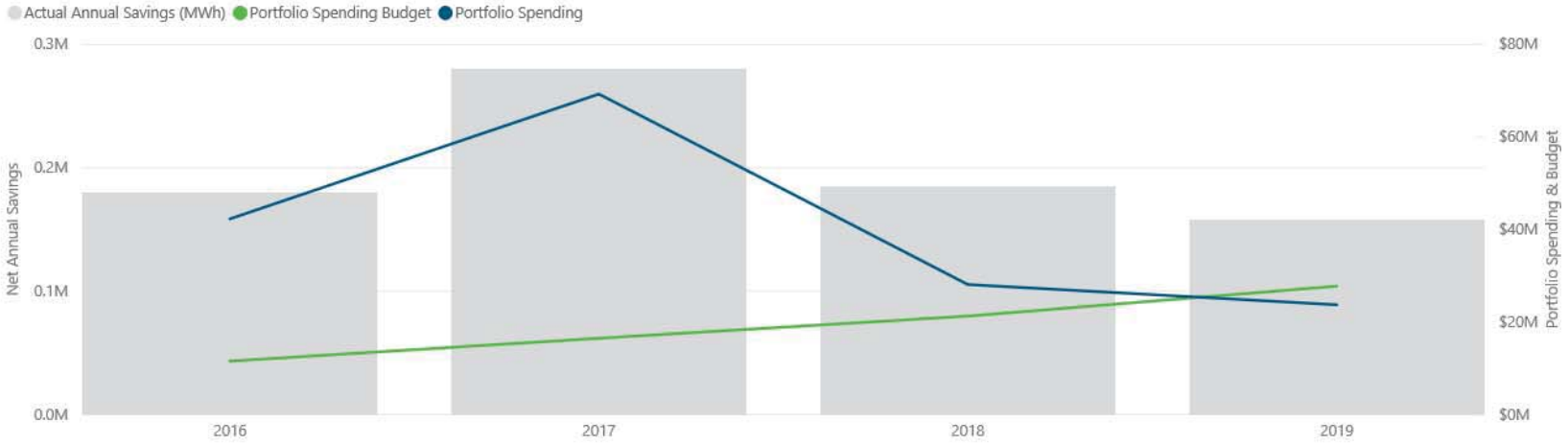
1) Values are reflected at the system level.

2019 YTD Results	Annual Forecast	Actual at 12/31/2019	Variation
Savings (MWH)	48,474	55,043	6,569
Savings (MW)	7.34	10	2.87
Participants		1,685,457	
2019 Program Expenses		$7,948,870	

DEC Smart $aver Prescriptive

All Program Budget, Savings & Number of Measures

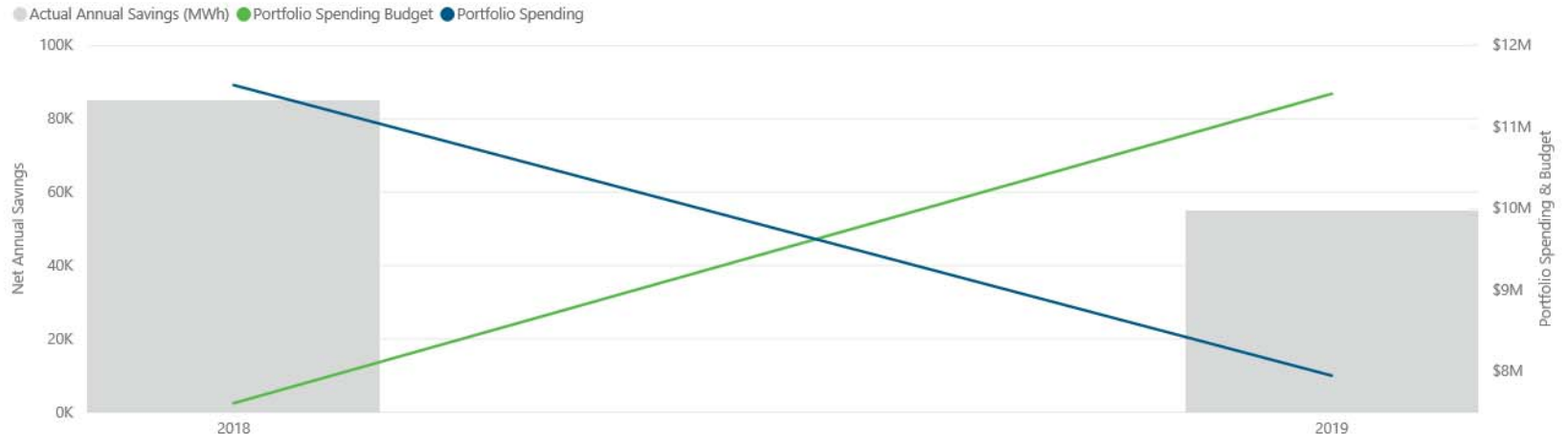
	Expenditures			Energy Savings			Demand Savings			Participants		
Program Year	Budget	Actual	%	Budget	Actual	%	Budget	Actual	%	Budget	Actual	%
2019	$27,756,994	$23,730,040	85%	160,731	158,072	98%	23.64	29.97	127%	14,784,792	8,510,436	58%
2017	$16,484,450	$69,309,592	420%	87,299	280,372	321%	15.25	49.11	322%	381,368	5,323,913	1396%
2016	$11,553,041	$42,304,359	366%	105,657	179,738	170%	18.01	30.96	172%	2,165,635	5,159,447	238%
2018	$21,277,469	$28,110,902	132%	103,721	184,840	178%	14.90	33.00	222%	19,681,171	5,050,134	26%



DEP Smart $aver Prescriptive

Non-Residential Smart$aver Prescriptive Program Budget, Savings & Number of Measures

	Expenditures			Energy Savings			Demand Savings			Participants		
Program Year	Budget	Actual	%	Budget	Actual	%	Budget	Actual	%	Budget	Actual	%
2019	$11,408,405	$7,948,870	70%	48,474	55,043	114%	7.34	10.21	139%	889,128	1,685,457	190%
2018	$7,610,009	$11,515,913	151%	29,919	85,112	284%	3.15	14.78	470%	2,927,380	1,098,692	38%



Custom Programs

Smart $aver Custom

Non Residential Smart Saver Custom[1]

$ in millions, rounded	Vintage 2019 As Filed	Vintage 2019 YTD December 31, 2019	% of Target
NPV of Avoided Cost	$24.1	$35.9	149%
Program Cost	$10.1	$8.9	88%
MW	6.9	10.1	146%
MWH	60,678.5	52,522.6	87%
Units	48,280	34,709	72%

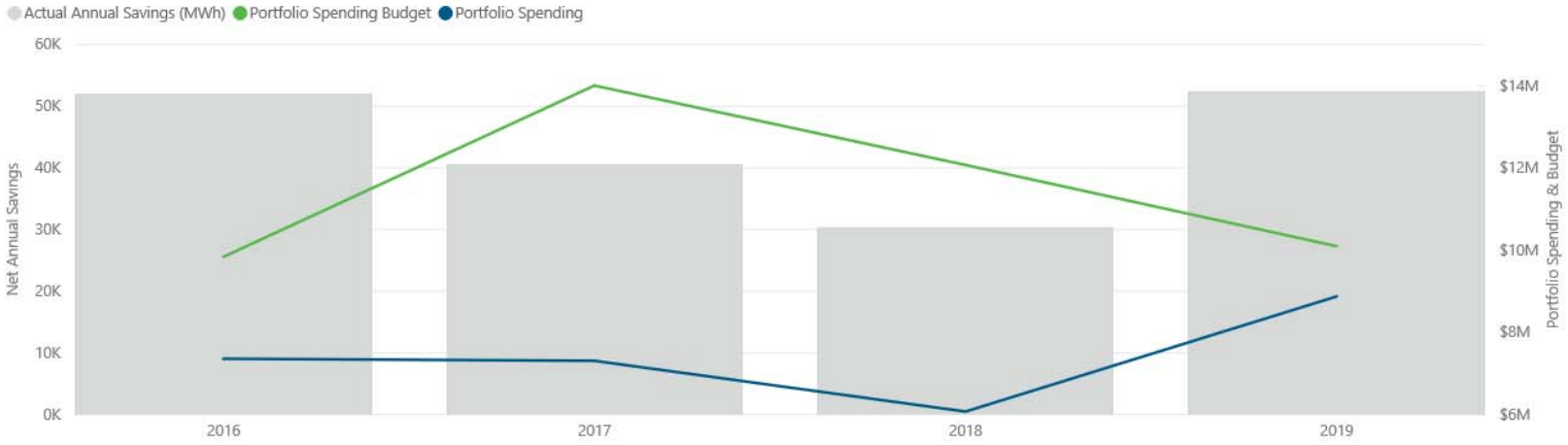
1) Values are reflected at the system level.

2019 YTD Results	Annual Forecast	Actual at 12/31/2019	Variation
Savings (MWH)	13,879	13,130	-749
Savings (MW)	1.58	3.12	1.54
Participants		10,996	
2019 Program Expenses		$2,769,305	

DEC Smart $aver Custom

Non Residential Smart Saver Custom Program Budget, Savings & Number of Measures

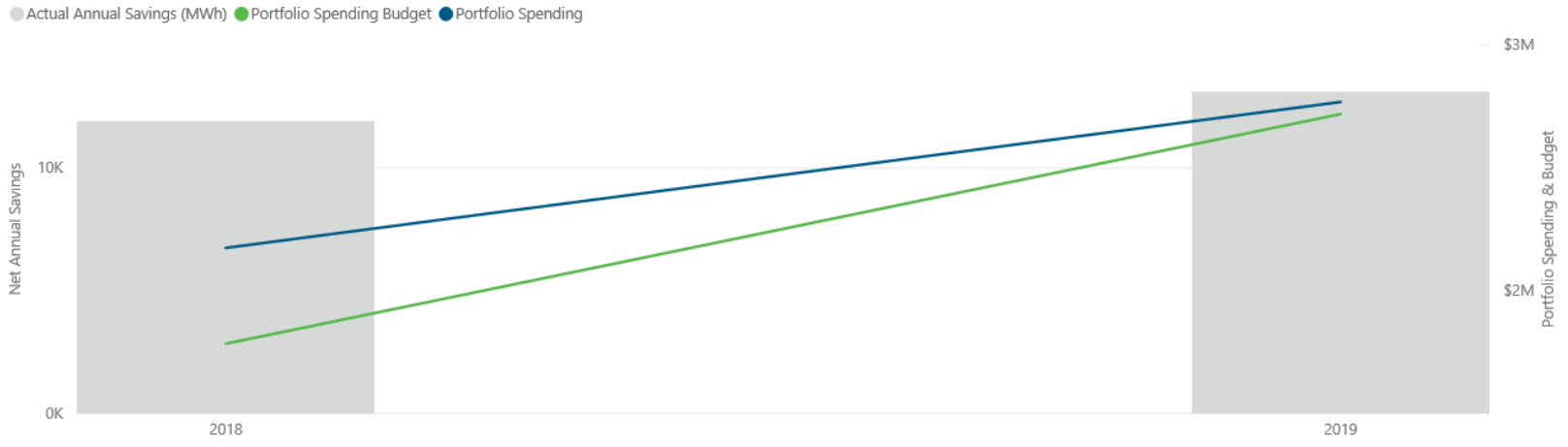
	Expenditures			Energy Savings			Demand Savings			Participants		
Program Year	Budget	Actual	%	Budget	Actual	%	Budget	Actual	%	Budget	Actual	%
2017	$14,005,768	$7,304,838	52%	90,102	40,610	45%	10.29	6.01	58%	73,002	40,134	55%
2019	$10,095,189	$8,871,440	88%	60,679	52,523	87%	6.93	10.11	146%	48,280	34,709	72%
2016	$9,835,671	$7,356,509	75%	78,437	52,155	66%	8.95	7.93	89%	63,551	34,098	54%
2018	$12,072,548	$6,068,902	50%	95,316	30,333	32%	10.88	4.05	37%	62,136	23,345	38%



DEP Smart $aver Custom

Non-Residential Smart$aver Custom Program Budget, Savings & Number of Measures

	Expenditures			Energy Savings			Demand Savings			Participants		
Program Year	Budget	Actual	%	Budget	Actual	%	Budget	Actual	%	Budget	Actual	%
2018	$1,783,447	$2,174,163	122%	11,484	11,901	104%	1.31	1.88	144%	8,760	11,338	129%
2019	$2,719,960	$2,769,305	102%	13,879	13,130	95%	1.58	3.12	197%	10,308	10,996	107%



Custom Assessments

Non Residential Smart Saver Custom Technical Assessments[1]

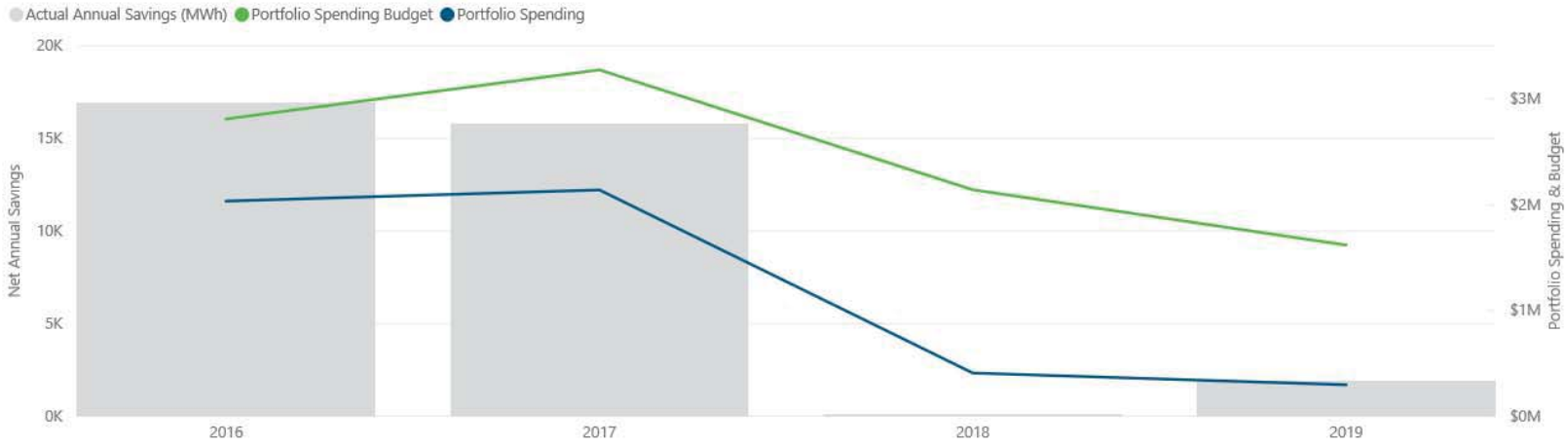
$ in millions, rounded	Vintage 2019 As Filed	Vintage 2019 YTD December 31, 2019	% of Target
NPV of Avoided Cost	$3.5	$0.7	20%
Program Cost	$1.6	$0.3	18%
MW	1.0	0.1	15%
MWH	8,831.6	1,930.8	22%
Units	6,125	4	0%

1) Values are reflected at the system level.

DEC Custom Assessments

Non Residential Smart Saver Custom Technical Assessments Program Budget, Savings & Number of Measures

	Expenditures			Energy Savings			Demand Savings			Participants		
Program Year	Budget	Actual	%	Budget	Actual	%	Budget	Actual	%	Budget	Actual	%
2018	$2,141,618	$407,293	19%	20,322	84	0%	2.32	0.01	1%	13,248	218	2%
2016	$2,811,494	$2,034,308	72%	17,529	16,953	97%	2.00	1.58	79%	14,202	199	1%
2017	$3,276,235	$2,139,875	65%	13,281	15,792	119%	1.52	1.63	107%	10,760	9	0%
2019	$1,618,240	$295,925	18%	8,832	1,931	22%	1.01	0.15	15%	6,125	4	0%



Performance Incentive

Non Residential Smart Saver Performance Incentive[1]

$ in millions, rounded	Vintage 2019 As Filed	Vintage 2019 YTD December 31, 2019	% of Target
NPV of Avoided Cost	$8.5	$2.2	26%
Program Cost	$3.2	$0.8	25%
MW	2.5	0.4	16%
MWH	21,489.5	4,546.0	21%
Units	23,254,911	19	0%

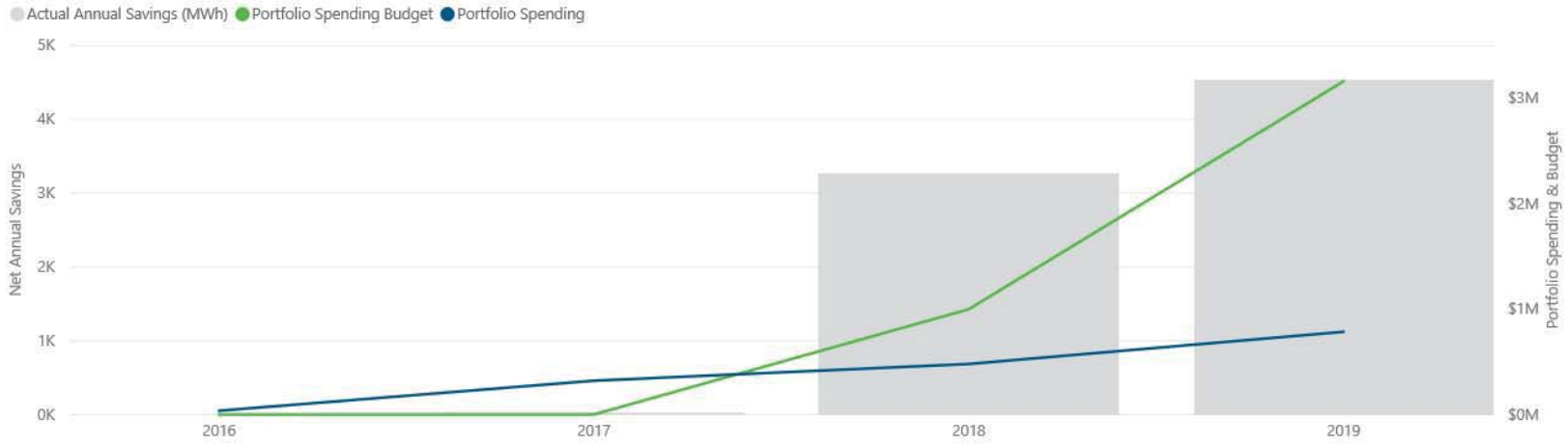
1) Values are reflected at the system level.

2019 YTD Results	Annual Forecast	Actual at 12/31/2019	Variation
Savings (MWH)	6,577	1,357	-5,220
Savings (MW)	0.75	0.10	-0.65
Participants		62	
2019 Program Expenses		$269,460	

DEC Performance Incentive

Non Residential Smart Saver Performance Incentive Program Budget, Savings & Number of Measures

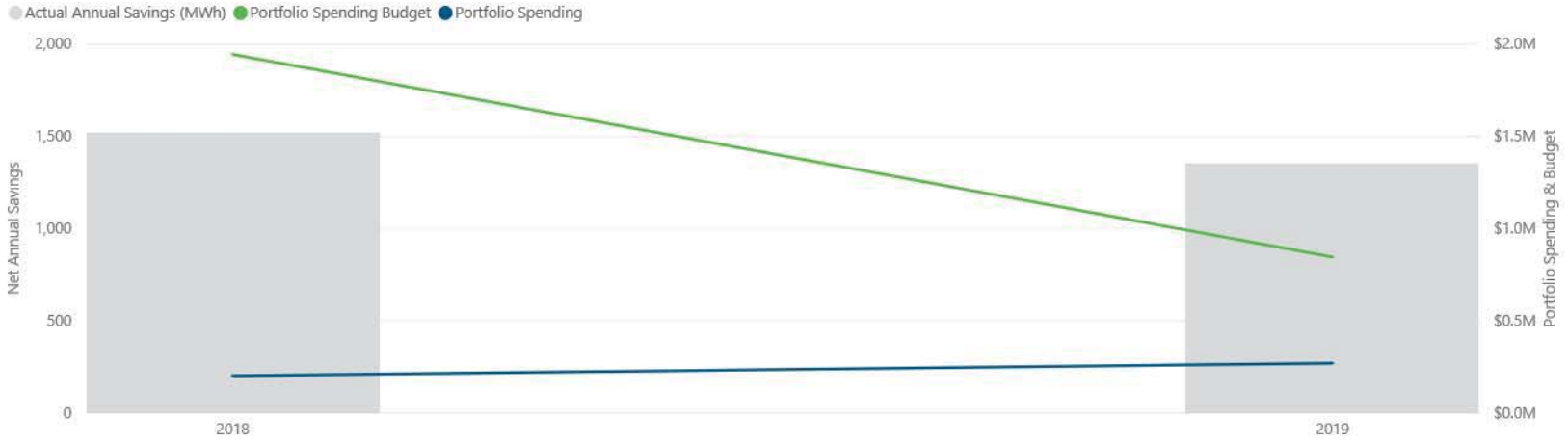
	Expenditures			Energy Savings			Demand Savings			Participants		
Program Year	Budget	Actual	%	Budget	Actual	%	Budget	Actual	%	Budget	Actual	%
2018	$998,804	$479,610	48%	5,706	3,271	57%	0.65	0.17	26%	6,174,765	118	0%
2017	$0	$320,559	0%	0	12	0%	0.00	0.00	0%	0	19	0%
2019	$3,162,160	$784,949	25%	21,489	4,546	21%	2.45	0.39	16%	23,254,911	19	0%
2016	$0	$35,670	0%	0	0	0%	0.00	0.00	0%	0	0	0%



DEP Performance Incentive

Non-Residential Smart$aver Performance Program Budget, Savings & Number of Measures

	Expenditures			Energy Savings			Demand Savings			Participants		
Program Year	Budget	Actual	%	Budget	Actual	%	Budget	Actual	%	Budget	Actual	%
2019	$845,910	$269,460	32%	6,577	1,357	21%	0.75	0.10	13%	6,320,736	62	0%
2018	$1,945,905	$201,559	10%	1,729	1,519	88%	0.20	0.13	65%	1,662,148	37	0%



Demand Response

EnergyWise Business

EnergyWise for Business[1]

$ in millions, rounded	Vintage 2019 As Filed[3]	Vintage 2019 YTD December 31, 2019	% of Target
NPV of Avoided Cost	$3.3	$2.7	83%
Program Cost	$4.0	$3.7	93%
MW	16.7	11.6	70%
MWH	2,885.9	2,704.1	94%
Units[2]	19,023	15,053	79%

1) Values are reflected at the system level.

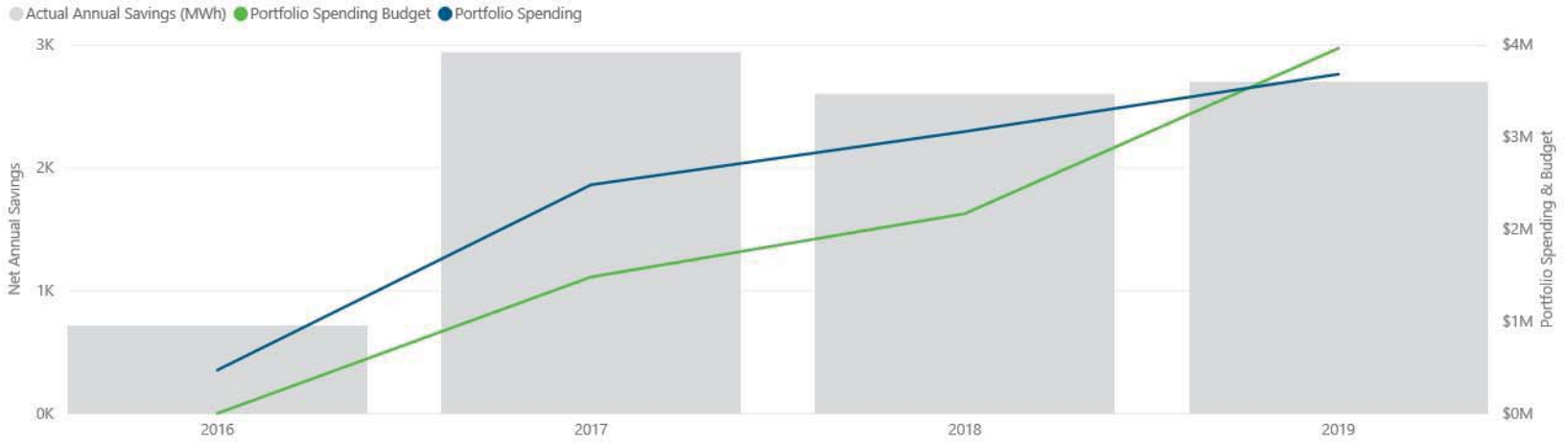
2) Units represent average monthly kW at meter for demand response measures (10,071), plus individual participants for smart thermostat energy efficiency measures (4,982).

2019 YTD Results	Annual Forecast	Actual at 12/31/2019	Variation
Savings (MWH)	1,537	55.15	-1,481
Savings (MW)	8.89	4.79	-4.09
Participants (EE & DR)		7,460	
2019 Program Expenses		$2,382,632	

DEC Energy Wise Business

EnergyWise for Business Program Budget, Savings & Number of Measures

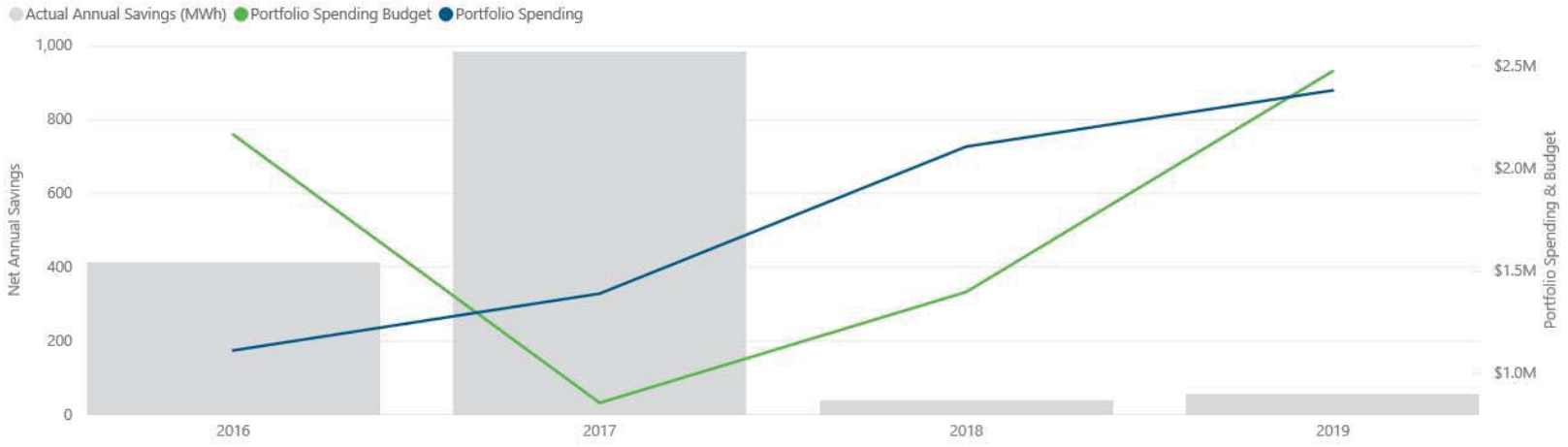
	Expenditures			Energy Savings			Demand Savings			Participants		
Program Year	Budget	Actual	%	Budget	Actual	%	Budget	Actual	%	Budget	Actual	%
2019	$3,967,504	$3,686,451	93%	2,886	2,704	94%	16.66	11.60	70%	19,023	15,053	79%
2018	$2,170,686	$3,062,816	141%	3,530	2,600	74%	17.03	8.00	47%	6,863	11,505	168%
2017	$1,482,746	$2,484,618	168%	1,757	2,944	168%	8.97	5.45	61%	3,342	8,537	255%
2016	$0	$470,304	0%	0	719	0%	0.00	1.20	0%	0	1,960	0%



DEP EnergyWise for Business

EnergyWise for Business Program Budget, Savings & Number of Measures

	Expenditures			Energy Savings			Demand Savings			Participants		
Program Year	Budget	Actual	%	Budget	Actual	%	Budget	Actual	%	Budget	Actual	%
2019	$2,476,808	$2,382,632	96%	1,537	55	4%	8.89	4.79	54%	6,750	7,460	111%
2018	$1,398,553	$2,108,030	151%	2,158	38	2%	10.54	2.66	25%	2,838	2,017	71%
2017	$857,190	$1,390,549	162%	986	984	100%	5.04	2.89	57%	1,896	1,664	88%
2016	$2,166,386	$1,112,815	51%	649	412	64%	1.55	0.52	34%	781	697	89%



PowerShare

PowerShare[1]

$ in millions, rounded	Vintage 2019 As Filed	Vintage 2019 YTD December 31, 2019	% of Target
NPV of Avoided Cost	$38.5	$42.1	109%
Program Cost	$13.3	$13.0	98%
MW[2]	337.9	342.6	101%
MWH	0.0	N/A	-
Units[3]	318,083	322,533	101%

Notes on Tables:

1) Values are reflected at the system level.

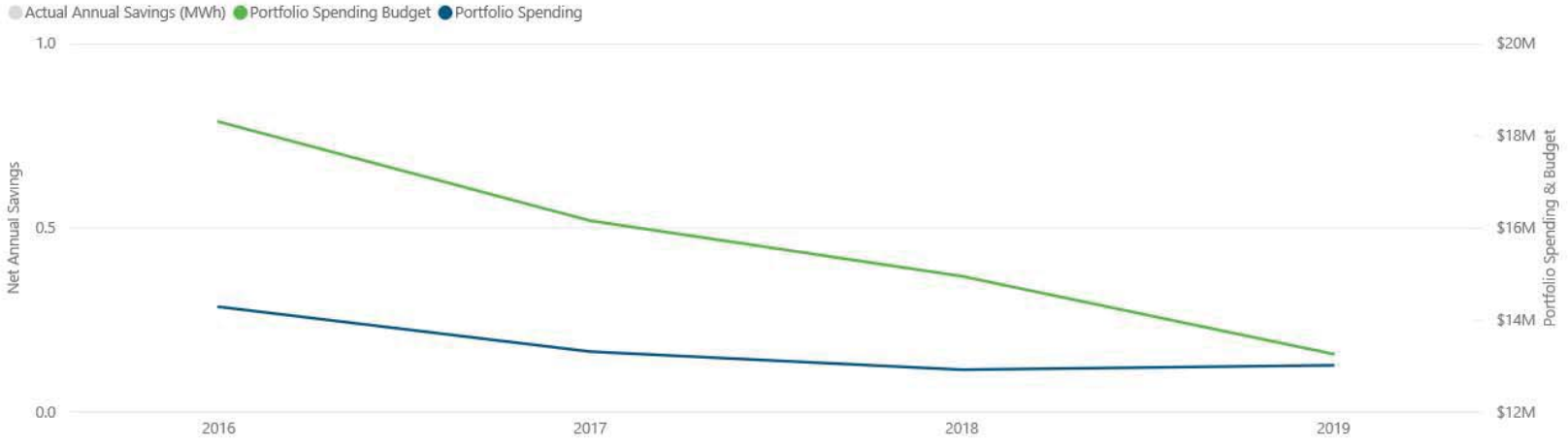
2) MW capability derived by taking average over specific PowerShare contract periods. At month-end December 2019, we had the ability to shed 342.6 MW (at the plant), representing 101% of the as filed capacity.

3) Units included in filing represented KW at meter, rather than number of participants.

DEC PowerShare

PowerShare Program Budget, Savings & Number of Measures

	Expenditures			Energy Savings			Demand Savings			Participants		
Program Year	Budget	Actual	%	Budget	Actual	%	Budget	Actual	%	Budget	Actual	%
2016	$18,313,920	$14,291,024	78%	0	0	0%	424.80	368.90	87%	399,929	347,302	87%
2019	$13,263,911	$13,019,606	98%	0	0	0%	337.86	342.59	101%	318,083	322,533	101%
2017	$16,161,676	$13,316,535	82%	0	0	0%	371.37	340.37	92%	349,625	320,442	92%
2018	$14,955,081	$12,922,977	86%	0	0	0%	388.03	332.63	86%	365,308	313,157	86%



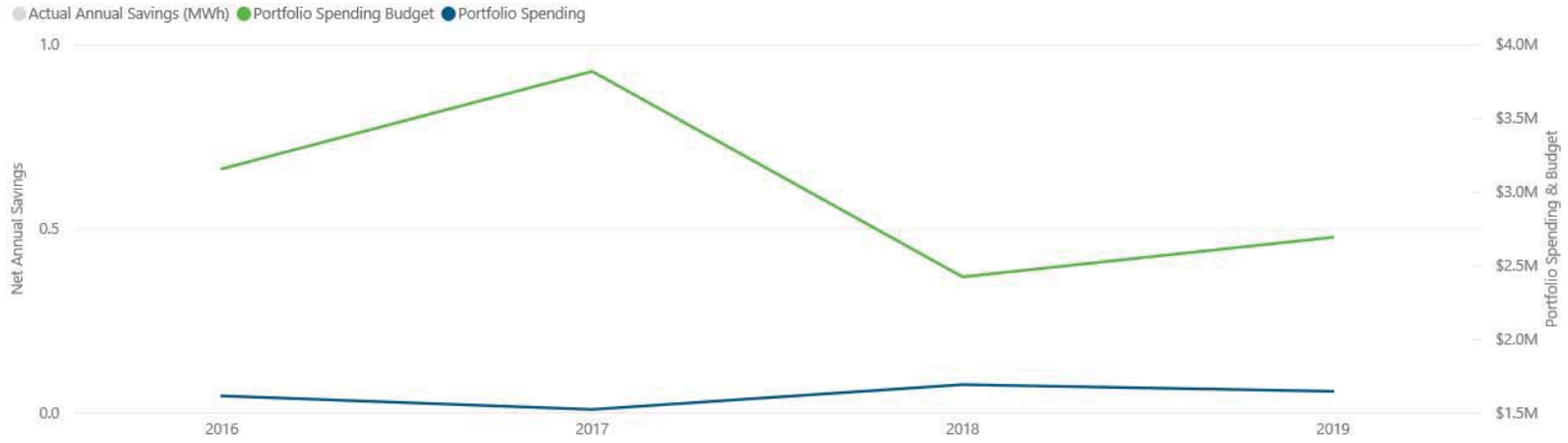
CIG DRA

2019 YTD Results	Annual Forecast	Actual at 12/31/2019	Variation
Savings (MWH)	N/A	N/A	N/A
Savings (MW)	29.95	25.16	-4.79
Participants		71	
2019 Program Expenses		$1,647,027	

DEP CIG DRA

Commercial, Industrial, & Governmental Demand Response Program Budget, Savings & Number of Measures

	Expenditures			Energy Savings			Demand Savings			Participants		
Program Year	Budget	Actual	%	Budget	Actual	%	Budget	Actual	%	Budget	Actual	%
2019	$2,694,260	$1,647,027	61%	0	0	0%	7.36	2.57	35%	7,000	2,442	35%
2017	$3,822,330	$1,523,514	40%	0	0	0%	14.71	1.97	13%	14,000	1,873	13%
2018	$2,424,856	$1,692,473	70%	0	0	0%	7.36	1.63	22%	7,000	1,550	22%
2016	$3,159,367	$1,615,703	51%	0	0	0%	12.93	-5.34	-41%	12,300	0	0%



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Upstream Channel

Upstream Channel

- Launch an Upstream channel as part of our existing prescriptive program to work directly with HVAC and Food Service manufacturers. Point of sale rebates would be offered to customers who purchase high-efficiency equipment. Goal is to drive more participation in these technologies.
- Currently, we are not capturing the participation for manufacturer direct sales in many instances. This modification to our existing prescriptive program would provide a direct extension of the core rebates through manufacturers.
- The Upstream channel would work the same as our current Midstream channel but with manufacturers instead of distributors.
- Potential manufacturers:
  - HVAC: Nest, Daikin
  - Food Service: Accutemp, Avantco

Upstream Channel

- Rebates would match the measures offered in Midstream and cost effectiveness would remain the same as the current prescriptive numbers.

Cost Effectiveness 2019	Food Service DEC	HVAC DEC	Food Service DEP	HVAC DEP
UCT	1.12	2.13	1.21	2.14
TRC	0.66	1.81	0.66	1.86
RIM	0.58	0.54	0.62	0.76
PCT	1.32	3.79	1.45	3.44

- Next steps:
  - Develop process and communications
  - Launch early Q2

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Non-Residential Program Modification Ideas

DEC/DEP Collaborative March 19, 2020

Review of January Discussion

- Discussed the barriers for Business Customers to invest in EE

- Recommended Updates to Small Business Energy Saver program
  - Trade Ally centric model
  - Provide third-party, no-money upfront payment alternatives - such as project financing, equipment leases, efficiency as a service (pay through savings), etc.
  - Accessible to business customers of all sizes and segments
    - Support/incentives/carve-out for small businesses
    - Extending to low-income communities
  - Sub-metering equipment and data analysis to accurately track energy savings
  - Performance-based incentives paid per actual kWh saved
  - Performance reporting back to the customer

Proposed Program Updates

- Program Name updated to “Business Energy Saver” with two channels
  - Small Business Energy Saver
    - To ensure that the smallest businesses are still served, keep the current single-provider direct install model for customers up to 50 kW
      - Research on past SBES participants indicates 50 kW and below is appropriate for smaller projects (< $15K) that do not fit SmartPath model
    - SmartPath TAs may be an option if the customer requests this (Ex: multi-site customers or special equipment)
  - SmartPath (official name TBD – running through legal)
    - Customers > 50 kW
    - Authorized Trade Allies perform the work
    - SBES vendor may be an option if no authorized TAs are suitable (Ex: rural areas, low income communities)
- For both options, incentive payments based on the projected energy savings, for EE equipment such as in lighting; refrigeration; HVAC; variable frequency drives; and other commercial and industrial equipment.

Proposed Program Updates, cont.

- SmartPath
  - In most cases, require a minimum amount of usage history and/or pre-monitoring of equipment energy usage
  - The program will identify Authorized Trade Allies, and enter into agreements with them to follow program rules and processes
  - Authorized Trade Allies will

  - Financing options will be between the customer and the TA or another lender.
  - The program will provide information on projected savings which the customer could plan to use for repayment

Development Activities to Date

Program Administrator - Request for Proposal

- Scope of work to include a web-based platform for Trade Allies and the Program team, resources for training, TA and customer support
- 22 prospective bidders invited; 16 expressed interest so far
- Proposals due April 10

Marketing

- Working name “SmartPath” still subject to final business and legal approval
- SMB Customer Panel Survey scheduled for April to validate assumptions around barriers and help prioritize the Program emphasis

TA feedback

- Informal feedback received from 3 existing S$ trade allies; very interested but questions point to need for training and tools for them to adjust to this new model

Customer Journey Mapping

Timeline

- March 9 – RFP issued
- March 19 – DEC/DEP Collaborative
- April 10 – program administrator proposals due
- April – SMB customer panel survey
- April/May – file updated Business Energy Saver tariff
  - Timing subject to the proposal pricing, and issues identified by bidders
- Summer - Program approval
- Following program approval
  - Sign contract with program administrator
  - Recruit trade allies
  - Train trade allies
- Late 2020 - Begin marketing SmartPath

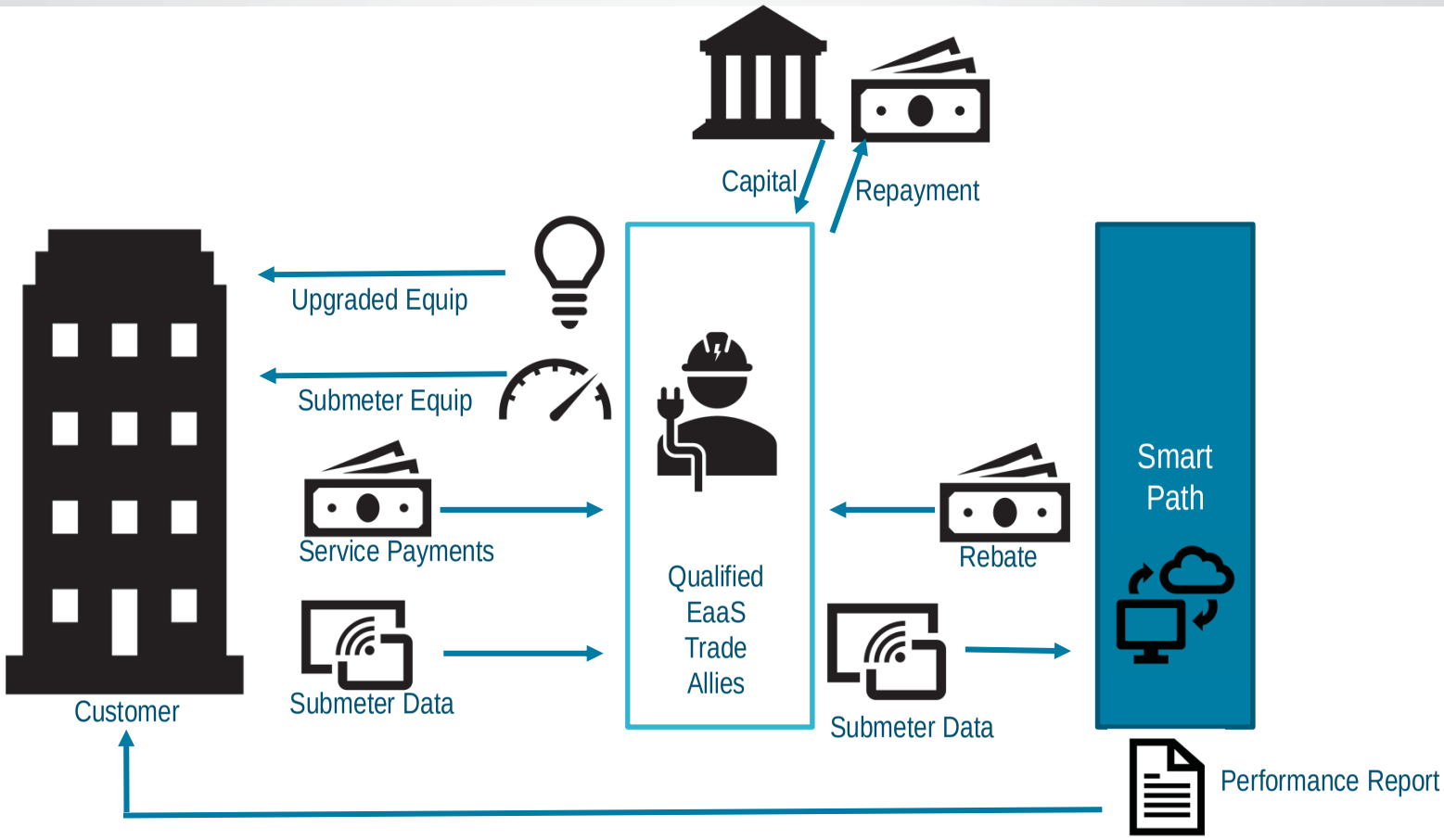
Cost Effectiveness

- Preliminary assessment
  - Avg UCT 2.9
  - Avg TRC 1.6
- To be updated with revised program administration costs

EaaS Measure Details

Measure Name	Notes	Measure Life
HVAC AC New System	New air conditioning systems	15
HVAC HP New System	New heat pump systems	15
HVAC AC Optimization	Air conditioning only = Full tune-up (w/ refrigerant charge), VFD HVAC fans, Advanced RTU controls, EC motors on compressors, network control thermostats, etc.	15
HVAC HP Optimization	All optimization above but for AC + electric heat (heat pumps)	15
HVAC AC New System w/ Optimize	New AC system with optimization measures	15
HVAC HP New System w/ Optimize	New heat pump system with optimization measures	15
Lighting 8760	all LED measures (retrofits & new fixtures, lamps) operating at least 8,040 hours per year (335 days, 24 hrs/day)	15
Lighting Day	all LED measures (retrofits & new fixtures, lamps) operating mostly within normal business hours (generally 6a - 7p)	15
Lighting Night	all LED measures (retrofits & new fixtures, lamps) operating mostly overnight	15
Existing Lighting w/ Controls 8760	lighting controls (connected or otherwise) added to existing lighting operating at least 8,040 hours per year (335 days, 24 hrs/day)	8
Existing Lighting w/ Controls Day	lighting controls (connected or otherwise) added to existing lighting operating mostly within normal business hours	8
Existing Lighting W/ Controls Night	lighting controls (connected or otherwise) added to existing lighting operating mostly overnight	8
New Lighting w/ Controls 8760	new LED measures with new controls operating at least 8,040 hours per year (335 days, 24 hrs/day)	15
New Lighting w/ Controls Day	new LED measures with new controls operating mostly within normal business hours (generally 6a - 7p)	15
New Lighting W/ Controls Night	new LED measures with new controls operating mostly overnight	15
Refrigeration New Equipment	All new refrigeration equipment	15
Refrigeration Optimization	Cooler/Freezer ECMS, anti-sweat heater controls, etc	12
C&I Equipment	non-HVAC Optimization (incl VFDs), VSD Air Compressor	15

Proposed Model



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Proposed Customer Journey

1. Customer receives marketing from program
2. Customer fills out form, calls Duke or requests call back; provides basic information on facility
3. Customer is contacted by TA(s) to schedule audit(s)
4. Customer audit(s) performed by TA(s)
5. Customer receives proposal(s) from TA(s) to include Program Proposal & TA-Customer Contract
6. Customer says yes or no to TA
7. If applicable, Customer gives TA (or 3rd party) required data to qualify for project financing
8. TA installs submeters for pre-monitoring
9. Customer may receive revised proposal based on sub-metered data
10. Installation scheduled and started; Change Orders as needed
11. Installation complete
    a. Start 2 week post-monitoring
    b. If needed, TA contacts customer to address low savings
12. Customer begins payments to TA
13. Customer receives savings report from Program

Trade Ally Draft Requirements

- Trade Allies must be qualified to participate in “SmartPath”
  - Sign an agreement with the Program
  - Agree to code of conduct
  - Participate in Program training
  - Agree to the SmartPath process
  - Compete with other trade allies during the process
  - Update the Program on projects via a web-based platform provided by the Program Administrator
  - Address projects with savings lower than expected
  - Provide or help arrange project financing for customers

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DEP Weatherization Recap

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Wrap Up,
Scheduling,
Topics for Future Collaboratives

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Exhibit 3

Duke Energy Carolinas, LLC – Executive Summary

A. Description

During the first quarter 2019, Duke Energy Carolinas product managers prepared reports on each program describing the offerings and detailing each program's performance. This Executive Summary describes how the Company performed at an aggregate level during the full year of Vintage 2019 in comparison to as-filed information. Program-specific details are provided in the individual reports.

Program reports include:

Program	Category	Customer
Energy Assessments	EE	Residential
Energy Efficient Appliances and Devices	EE	Residential
Energy Efficiency Education Programs	EE	Residential
Residential – Smart $aver Energy Efficiency Program (HVAC EE)	EE	Residential
Income Qualified Energy Efficiency and Weatherization Assistance	EE	Residential
My Home Energy Report	EE	Residential
Multi-Family Energy Efficiency	EE	Residential
Non-Residential Smart $aver Prescriptive	EE	Non-residential
Non-Residential Smart $aver Custom	EE	Non-residential
Non-Residential Smart $aver Custom Assessment	EE	Non-residential
Non-Residential Smart $aver Performance Incentive	EE	Non-residential
Small Business Energy Saver	EE	Non-residential
EnergyWise for Business	EE/DSM	Non-residential
Power Manager	DSM	Residential
PowerShare	DSM	Non-residential

Audience

All retail Duke Energy Carolinas customers who have not opted out.

B &C. Impacts, Participants and Expenses

The tables below include actual results for the full year of Vintage 2019 in comparison to as-filed data for Vintage 2019.

The Company includes the number of units achieved and a percentage comparison to the as filed values. The unit of measure varies by measure as a participant, for example, may be a single LED bulb, a kW, a kWh, a household or a square foot. Due to the multiple measures in a given program or programs, units may appear skewed and are not easily comparable.

Carolinas System Summary[1]

$ in millions, rounded	Vintage 2019 As Filed	Vintage 2019 YTD December 31, 2019	% of Target
NPV of Avoided Cost	**$356.3**	**$437.7**	**123%**
Program Cost	**$144.8**	**$150.4**	**104%**
MW[2]	**1,039.9**	**1,103.0**	**106%**
MWH	**781,393.7**	**844,286.5**	**108%**
Units	**106,419,427**	**72,688,882**	**68%**

1) Values are reflected at the system level.

2) As filed MW are annual maximum peak. Coincident peak is tracked for impacts.

Duke Energy Carolinas, LLC – Executive Summary

Carolinas Demand Response Summary[1]

$ in millions, rounded	Vintage 2019 As Filed	Vintage 2019 YTD December 31, 2019	% of Target
NPV of Avoided Cost	$102.6	$114.6	112%
Program Cost	$31.3	$30.1	96%
MW[2]	888.9	922.4	104%
MWH	2,885.9	2,704.1	94%
Units[3]	840,237	873,290	104%

1) Values are reflected at the system level.
2) MW capability derived by taking the average over the PowerShare and PowerManager contract periods.
3) Units included in filing represented kW at meter, rather than number of participants. YTD value reflects average participation for 2019.

Carolinas Energy Efficiency Summary[1]

$ in millions, rounded	Vintage 2019 As Filed	Vintage 2019 YTD December 31, 2019	% of Target
NPV of Avoided Cost	$253.7	$323.1	127%
Program Cost	$113.6	$120.3	106%
MW[2]	150.9	180.6	120%
MWH	778,507.8	841,582.4	108%
Units	105,579,190	71,815,592	68%

1) Values are reflected at the system level.
2) As filed MW are annual maximum peak. Coincident peak is tracked for impacts.

D. Qualitative Analysis

Energy efficiency impacts have primarily been driven by lighting measures for both residential and non-residential customers. This is a result of a higher take-rate for lighting offerings than originally projected.

Highlights

Energy Efficiency
Customer participation continues to be largely driven by lighting and assessments programs. These measures provide customers with a relatively low-cost efficiency upgrade, with minimal effort, creating a positive initial energy efficiency experience.

Demand Side Management (DSM)
The DSM portfolio is comprised of PowerShare (non-residential), Power Manager (residential), and EnergyWise for Business (non-residential) programs. The impacts and participation were very close to the 2019 as-filed targets.

Issues

A few of the Company's programs filed for program modifications at the close of the year. The Company faces a significant challenge with reductions in avoided costs, making programs and their measures potentially less impactful. As a result of this and other factors, the Company's continued assessment of its portfolio may result in the removal of or change in measures.

Potential Changes

Several programs are reviewing their current processes and are considering potential changes to increase customer adoption. Potential changes are discussed in individual program reports.

E. Marketing Strategy

Located in individual reports.

F. Evaluation, Measurement and Verification

Located in individual program reports.

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Income-Qualified Energy Efficiency and Weatherization Assistance Program

A. Description

The purpose of the Low Income Energy Efficiency and Weatherization Assistance Program ("Program") is to assist low income customers with installing energy efficiency measures in their homes. There are three offerings currently in the Program:

- Neighborhood Energy Saver ("NES")
- Weatherization and Equipment Replacement Program ("WERP")
- Refrigerator Replacement Program ("RRP").

WERP and RRP are available for income-qualified customers in Duke Energy Carolinas, LLC's (the "Company's") service territory for existing, individually metered single-family homes, condominiums, and mobile homes. Funds are available for (i.) weatherization measures and/or (ii.) heating system replacement with a 15 or greater SEER heat pump, and/or (iii.) refrigerator replacement with an Energy Star appliance. The measures eligible for funding will be determined by a full energy audit of the residence. Based on the results of the audit, customers are placed into a tier based on energy usage so that high energy users to receive more extensive weatherization measures. (Tier 1 provides up to $600 for energy efficiency services; and Tier 2 provides up to $4,000 for energy efficiency services, including insulation.) WERP and RRP are delivered in coordination with State agencies that administer the state's weatherization programs.

Customers participating in NES receive a walk-through energy assessment to identify energy efficiency opportunities in the customer's home and a one-on-one education on energy efficiency techniques and measures. Additionally, the customer receives a comprehensive package of energy efficient measures. NES participants may have the measures listed below installed in their homes based on the opportunities identified during the energy assessment.

1. Energy Efficient Bulbs - Up to 15 energy efficient bulbs (LEDs) to replace incandescent bulbs
2. Electric Water Heater Wrap and Insulation for Water Pipes
3. Electric Water Heater Temperature Check and Adjustment
4. Water Saving Faucet Aerators - Up to three faucet aerators
5. Water Saving Showerheads - Up to two showerheads
6. Wall Plate Thermometer
7. HVAC Winterization Kits – Up to three kits for wall/window air conditioning units will be provided along with education on the proper use, installation and value of the winterization kit as a method of stopping air infiltration.
8. HVAC Filters - A one-year supply of HVAC filters will be provided along with instructions on the proper method for installing a replacement filter.
9. Air Infiltration Reduction Measures - Weather stripping, door sweeps, caulk, foam sealant and clear patch tape will be installed to reduce or stop air infiltration around doors, windows, attic hatches and plumbing penetrations.

Audience

WERP is available to qualified customers in existing individually metered, owner-occupied single-family residences, condominiums or manufactured homes.

RRP is available to qualified customers in individually metered residences irrespective of whether the property owner or the tenant owns the refrigerator.

NES is available to individually metered residential customers in selected neighborhoods where ~50% of the homeowners have income equal to or less than 200% of the Federal Poverty Guidelines, based on third party and census data.

Income-Qualified Energy Efficiency and Weatherization Assistance Program

B &C. Impacts, Participants and Expenses

Income Qualified Energy Efficiency and Weatherization Assistance[1]

$ in millions, rounded	Vintage 2019 As Filed	Vintage 2019 YTD December 31, 2019	% of Target
NPV of Avoided Cost	**$1.5**	**$3.6**	**239%**
Program Cost	**$7.9**	**$7.3**	**93%**
MW	**0.6**	**1.1**	**173%**
MWH	**4,043.4**	**9,029.8**	**223%**
Units	**10,114**	**10,814**	**107%**

1) Values are reflected at the system level.

D. Qualitative Analysis

Highlights

Neighborhood Energy Saver: After receiving regulatory approval from both the North Carolina Utilities Commission and the South Carolina Public Service Commission in the fall of 2012, the Program was officially launched by the Company in March 2013. The yearly goal is to serve a minimum of 8,926 households. Honeywell Building Solutions was awarded the contract through a competitive bid process to administer the Program.

In 2019, NES offered free walk-through energy assessments to 8 qualifying neighborhoods in NC – Bessemer City, Burlington, Charlotte, Durham, Greensboro, Hickory, Kannapolis, Winston Salem and 3 qualifying neighborhoods in SC – Greenville, Kershaw and Spartanburg. Neighborhood events have included support from community groups and speakers such as elected officials, community leaders and community action agency representatives.

Weatherization: The Company launched WERP and RRP in February 2015 in North and South Carolina. The Company selected the program administrator, North Carolina Community Action Agency (NCCAA), in December 2014 via competitive bidding. The company is working with the NC and SC Weatherization Agencies to deliver this program.

In 2019, 736 homes received weatherization in conjunction with the DOE weatherization program, with 292 refrigerators replaced, 69 Tier 1 services provided, and 667 Tier 2 services provided.

E. Marketing Strategy

Neighborhood Energy Saver: NES continues to target neighborhoods with a significant low-income customer base using a grassroots marketing approach to interact on an individual customer basis and gain trust. Participation is driven through a neighborhood kick-off event that includes trusted community leaders and local and state officials explaining the benefits of the Program. The purpose of the kick-off event is to rally the neighborhood around energy efficiency and to educate customers on methods to lower their energy bills. Customers have the option to make an appointment for an energy assessment at the time of the event.

In addition to the kick-off event, the Company plans to use the following avenues to inform eligible customers about the Program:

- Direct mail (letters and reminder post cards)
- Door hangers
- Press releases and/or neighborhood flyers

- Community presentations and partnerships
- Inclusion in community publications such as newsletters, etc.

Weatherization: WERP and RRP plan to piggy-back the marketing efforts of the current state Weatherization Assistance Programs administered by the state weatherization service providers. Additionally, agencies may utilize referrals generated from other Company energy efficiency programs as well as from their existing pool of weatherization applicants.

Direct Weatherization Pilot: In 2018-2019, a Direct Weatherization pilot was executed in a high-density area within DEC shown to have a significant low-income customer base. Through the use of internal customer data, high-energy use accounts with low-income indicators were targeted through direct mail and invited to apply for weatherization and refrigerator replacement programs. Through initial letters with follow-up postcards and a toll-free customer number, customers expressed their interests and follow-up appointments were set. Determination as to whether the program is to continue is pending.

F. Evaluation, Measurement and Verification

The process and impact evaluation report for the Neighborhood Energy Saver portion of the Program was completed late in the fourth quarter of 2019. This was a combined evaluation with DEP. High level impacts for the engineering estimates include 676 kWh energy savings per participant, due to higher percentages of participants with electrically-heated homes and water heating. Since the program is focused on income-qualified participants, the net-to-gross is considered 1.0

The process evaluation assessed program operations and identified potential opportunity areas. Satisfaction for the program overall and the measures specifically was high – both reflected scores of 99% of participants satisfaction.

Energy Efficiency Education Program

A. Description

The Energy Efficiency Education Program ("Program") is available to students in grades K-12 enrolled in public and private schools in the Duke Energy Carolinas (the "Company" or "DEC") service territory. The current curriculum administered by The National Theatre for Children ("NTC") provides performances in elementary, middle and high schools.

The Program provides principals and teachers with an innovative curriculum to educate students about energy, resources, how energy and resources are related, ways energy is wasted, and how to be more energy efficient. The centerpiece of the curriculum is a live theatrical production focused on concepts such as energy, renewable fuels and energy efficiency and performed by two professional actors. Teachers receive supportive educational material for classroom and student take-home assignments. The workbooks, assignments and activities meet state curriculum requirements.

School principals are the main point of contact for scheduling their school's performance at their convenience. Two weeks prior to the performance, all materials are delivered to the principal's attention for classroom and student distribution. Materials include school posters, teacher guides, and classroom and family activity books.

Students are encouraged to compete a request form with their families (found in their classroom and family activity book, as well as online) to receive an Energy Efficiency Starter Kit. The kit contains specific energy efficiency measures to reduce home energy consumption. It is available at no cost to eligible Duke Energy customer households at participating schools.

Audience

Eligible participants include the Company's residential customers who reside in households served by Duke Energy Carolinas with school-age children enrolled in public and private schools.

B &C. Impacts, Participants and Expenses

Energy Efficiency Education[1]

$ in millions, rounded	Vintage 2019 As Filed	Vintage 2019 YTD December 31, 2019	% of Target
NPV of Avoided Cost	$2.6	$2.5	98%
Program Cost	$2.1	$1.7	80%
MW	1.3	0.8	63%
MWH	5,701.5	6,713.8	118%
Units	26,705	24,785	93%

1) Values are reflected at the system level.

D. Qualitative Analysis

Highlights

The Company is supporting arts and theatre in schools while providing an important message about energy efficiency for students through an innovative delivery channel. Enhancing the message with a live theatrical production captivates the students' attention and reinforces the classroom curriculum materials provided.

For the 2018-2019 school year, elementary students enjoy watching *Kilowatt Kitchen* performed by two professional actors. Elementary schools will learn how to measure the energy we use and how we can reduce the energy we waste while watching Lorraine Quiche realize her dream of opening her own restaurant Kilowatt Kitchen. In this 25-minute educational play, Lorraine learns how to use energy wisely and saves the day for her Kilowatt Kitchen!

Energy Efficiency Education Program

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The E-Team is a 35-minute, live show for grades six through nine. The program consists of two actors with two goals. The first goal is to highlight how we measure energy, the uses of energy, how energy is wasted and renewable resources. The second goal is to make the middle school students laugh so hard that they forget they are learning. The show is a series of improvised comedy sketches between characters in all sorts of hilarious situations. Before each scene, actors interact with the audience and get ideas that will be used during the sketch, such as their favorite band or a household pet. The ideas are incorporated into the show and may change the course of a scene.

High School students enjoyed the 45-minute live performance titled “What’s your Goal”. The performance consists of segments including student volunteers to take part in a sketch called “Moving Bodies” where the volunteer has complete control over the movement of the two actors as the explore ways to save energy at home and discuss the impact that energy saving items can have. The second segment is a game show called “The Carbon Footrace”. Students are placed on teams and asked questions about what a carbon footprint is and ways they can reduce their own carbon footprint. The last segment takes the form of an interactive “TED Talk” style presentation where the actors explore topics relating to the effects of global climate change and how it relates to industries and economies. The students are offered information on what they can go and what careers they can explore to help do their part for the future of the planet.

From January through December 2019, a total of 587 schools hosted 919 performances in the Company’s DEC service territory, reaching approximately 198,278 students and spurring the distribution of 24,785 kits.

Once an eligible customer submits a completed energy efficiency, the Energy Efficiency Starter Kit is shipped for delivery within two to four weeks. To ensure customer satisfaction with the Energy Efficiency Starter Kit and the installation of items, customers receive an email reminder monthly after the kit delivery to encourage families to return their Business Reply Card (BRC) verifying installation of measures. Qualified households that submit their energy efficiency survey and return the BRC are automatically entered into the household contest drawing, sponsored by NTC.

Additionally, school and classroom contests encourage sign-ups, and NTC awards checks to schools whose students, along with their families, completed home energy surveys and received energy efficiency kits. In the fall and spring of each year, a drawing is held selecting one school and one household contest winner. Principals, teachers and students may view their school’s progress and compare the number of signups to other schools via the website, www.trackmysignups.org.

Updates

The Company continues to enhance the Program by the following:

- Introducing new productions each school year to refresh and refocus the materials and scripts to keep participating schools engaged.
- Promoting the program through social media to encourage awareness, recognition and participation.
- Partnering with Duke Energy Account and District Managers to leverage existing relationships in the community to develop positive media stories while encouraging kit sign ups.
- Offering teacher satisfaction survey evaluations after the performances for both the elementary and middle school shows. Average survey data from January through December indicated 95% of the Elementary teachers surveyed and 94% of Middle School teachers surveyed had very high satisfaction ratings.
- Enhancing the offering by providing additional materials for all student households, but particularly those that have already received the current Energy Efficiency Starter Kit as well as non-Duke Energy customer student households. Including non-Duke customer households increases

Energy Efficiency Education Program

customer satisfaction and provides additional energy savings impacts for all customers, but particularly those customers that would otherwise have been excluded from the kit offering.

- Inclusion of the Kilowatt Krush mobile gaming application that will allow users to learn about smart energy use and conservation through an engaging arcade of action-packed, energy themed games. Students build and customize virtual houses in the neighborhood of their choice while learning about energy efficiency and safety education.

E. Marketing Strategy

The National Theatre for Children is responsible for all marketing campaigns and outreach. The marketing channels may include but are not limited to the following:

Direct mail (letters to school administrators)
Email
In-Person
Program Website
Events or assemblies
Printed materials for classrooms
Social media promotions

These marketing efforts engage students and their families in energy conservation behavior and provide energy saving opportunities through the Energy Efficiency Starter kits.

F. Evaluation, Measurement and Verification

The evaluation report summary was presented at the Second Quarter 2019 Carolinas Collaborative. Results covered an evaluation period of August 2017 through July 2018. The evaluation methodology included verified impacts through engineering estimates. In addition, behavioral impacts were determined by surveying participants about actions taken as a result of the program and determining the engineering estimates of those actions. Participant surveys were also utilized to refine in-service rates, provide inputs into other algorithm variables, and help establish free ridership and spillover. Free ridership was estimated at 16% with spillover estimated at 9%, for an effective net-to-gross of 94%.

The process evaluation determined that teachers were satisfied with the performances and curriculum materials. Participating families were satisfied with the program overall and the measures included in the program, with lighting measures recording the highest satisfaction.

My Home Energy Report

A. Description

The My Home Energy Report ("MyHER" or the "Program") is a periodic usage report that compares a customer's energy use to similar residences in the same geographical area based upon the age, size and heating source of the home. The report includes recommendations to encourage energy saving behaviors. Customers with email addresses on file receive an electronic version of their reports monthly.

Customers receive reports up to 12 times per year via paper and electronic delivery. (Delivery may be interrupted during the off-peak energy usage months in the fall and spring.) The report delivers energy savings by encouraging customers to alter their energy use. Customer's usage is compared to the average homes (top 50 percent) in their area as well as the efficient homes (top 25 percent). It also suggests energy efficiency improvements, given the usage profile for that home. In addition, the report recommends measure-specific offers, rebates or audit follow-ups from the Company's other programs, based on the customer's energy profile. As of December 31, 2019, over 1.2 million single-family DEC customers and over 174 thousand multi-family DEC customers receive the MyHER report.

The MyHER interactive online portal allows customers to learn more about their energy use and about opportunities to reduce their usage. Customers can set goals, track their progress, and receive more targeted tips. As of December 31, 2019, over 68 thousand single-family customers and over 6 thousand multi-family customers were enrolled on the portal.

Audience

Target customers reside in individually metered, single-family and multi-family residences with active accounts and 13 months of concurrent service from Duke Energy Carolinas, LLC (the "Company"). Single-family residences receive up to 8 printed reports and, if they have an email address on file, 12 electronic reports. Multi-family residences with registered email addresses with the Company receive up to 4 printed reports and 8 electronic reports. Multi-family residences without registered email addresses with the Company receive up to 6 printed reports a year with a strong call to action to provide their email addresses.

B & C. Impacts, Participants and Expenses

My Home Energy Report[1]

$ in millions, rounded	Vintage 2019 As Filed	Vintage 2019 YTD December 31, 2019	% of Target
NPV of Avoided Cost	$20.9	$23.4	112%
Program Cost	$13.4	$10.6	79%
MW[2]	79.4	91.4	115%
MWH[2]	312,934.1	328,439.1	105%
Units[3]	1,364,000	1,339,152	98%

1) Values are reflected at the system level.

2) Values represent the annual MW and MWH savings associated with the December 2019 month end participation.

3) At month-end December 2019, single-family participation was 1,183,442, while multifamily participation was 155,710.

D. Qualitative Analysis

As customers receive subsequent reports and learn more about their specific energy use and how they compare to their peer group, their engagement increases. The report then provides tools in the form of targeted energy efficiency tips with actionable ideas to become more efficient. Program participants are encouraged to contact the Company with their questions, comments and report corrections. Report corrections continue to generate the largest number of inquiries. Customers wishing to be removed from the Program represent 0.03% of single-family Program participants and .01% of multi-family Program participants.

Highlights

In 2019, the program launched into the Duke Energy Mobile App. Participants in the MyHER program are now able to see their usage comparison and disaggregation in the mobile app. With the deployment of AMI meters throughout DEC, the program began sending AMI data to Tendril. Customers with AMI meters can see their interval energy usage on the MyHER interactive experience. In 2019, the program also launched new AMI usage charts on the eHERs which show customers the difference in average weekly usage by hour from one month to the next.

E. Marketing Strategy

The Program is marketed on the reports themselves by referring customers to the program website for additional information, Frequently Asked Questions ("FAQs") and contact resources. The MyHER Interactive portal is marketed by email campaigns as well as in the printed report.

In 2019, the program launched several email and on-report marketing campaigns to further awareness of the interactive portal. These campagins resulted in an in crease of over 56,900 customers enrolling in the interactive portal.

F. Evaluation, Measurement and Verification

The process and impact evaluation report, combined with DEP, was completed is scheduled for completion in the third quarter of 2019 and presented to the Carolinas Collaborative in the Second Quarter 2019.

As is typical with MyHER evaluations, the impact evaluation consisted of a billing analysis to determine the consumption differences between the treatment group and the control group. A summary of results include verified impacts of 248 kWh per participant. Due to the nature of the evaluation methodology, these impacts are inherently net impacts.

For the process evaluation, recommendations and opportunity areas included continuing the practice of simultaneous control and treatment assignment, limited to once or twice per year; continuing to increase awareness of MyHER Interactive; keeping an eye on effective change management; and continue prioritizing the structuring of the program processes and schedules

Energy Assessments

A. Description

The Home Energy House Call Program ("Program") is offered under the Energy Assessment Program. Duke Energy Carolinas, LLC (the "Company") partners with several key vendors to administer the Program.

The Program provides a free in-home assessment performed by a Building Performance Institute ("BPI") certified energy specialist and designed to help customers reduce energy usage and save money. The BPI-certified energy specialist completes a 60- to 90-minute walk through assessment of a customer's home and analyzes energy usage to identify energy savings opportunities. The energy specialist discusses behavioral and equipment modifications that can save energy and money with the customer. The customer also receives a customized report that identifies actions the customer can take to increase the home's efficiency. Examples of recommendations might include the following:

- Turning off vampire load equipment when not in use.
- Turning off lights when not in the room.
- Using energy efficient lighting.
- Using a programmable thermostat to better manage heating and cooling usage.
- Replacing older equipment.
- Adding insulation and sealing the home.

In addition to a customized report, customers receive an energy efficiency starter kit with a variety of measures that can be directly installed by the energy specialist. The kit includes measures such as energy efficiency lighting, a low-flow shower head, low flow faucet aerators, outlet/switch gaskets, weather stripping, and an energy saving tips booklet.

Audience

Eligible Program participants are the Company's residential customers that own a single-family residence with at least four months of billing history and central air, electric heat or an electric water heater.

B &C. Impacts, Participants and Expenses

Energy Assessments[1]

$ in millions, rounded	Vintage 2019 As Filed	Vintage 2019 YTD December 31, 2019	% of Target
NPV of Avoided Cost	**$4.2**	**$4.4**	**105%**
Program Cost	**$3.0**	**$3.2**	**107%**
MW	**1.0**	**0.9**	**91%**
MWH	**6,542.9**	**7,886.9**	**121%**
Units	**34,304**	**61,692**	**180%**

1) Values are reflected at the system level.
2) Units represent number of measures, and do include additional LEDs.

D. Qualitative Analysis

Highlights

The Company continues with a multi-channel approach which includes Duke Energy website pages, website banners, online services banner, paid search campaigns, Facebook, email, bill inserts, bill messages, direct mail, and customer segmentation to reach customers with a high propensity to participate. Examples of online, bill inserts and direct mail promotions are available in the appendix.

Energy Assessments

Program staff explores other channels for marketing campaigns to reach the target audience and maximize both program performance as well as customer experience.

Vendors, partners and the team at Duke Energy collaborate regarding marketing initiatives, future scheduling, availability, routing, targeting, backlog, etc. to drive efficient operations as well as customer satisfaction.

Through December 2019, the program conducted 10,268 assessments and installed 45,710 additional LEDs. program continues to focus on maximizing the number of measures installed as well as cross-promoting other Duke Energy programs and offerings.

Enhancements to the program in 2019 include a continuing focus on cross promotion of other programs and integration of in-field referrals for FindItDuke, upgrading showerheads to chrome, implementing thermal imaging technology, testing handheld showerheads, removing the four-month usage eligibility requirement and performing route optimization updates.

Potential Changes

Some program enhancements to increase the effectiveness of the Program being considered include the following:

- Continuing to optimize the online scheduling tool to enhance the customer experience
- Upgrading free measures to include pipewrap and additional bathroom aerators where relevant.
- Introducing upgradeable measures in field such as hand-held showerheads, smart thermostats, specialty bulbs, and blower door option
- Evaluating the incentive offerings to maximize savings and impacts as well as customer acceptance
- Including townhomes/condos for audit eligibility
- Implementing post audit follow up with reminders of recommendations/referrals.

E. Marketing Strategy

Program participation continues to be driven through a multichannel approach including targeted mailings to pre-qualified residential customers, bill inserts, online promotions and online video. For those who elect to receive offers electronically, email marketing continues to be used to supplement direct mail. Information about the Program was included in the My Home Energy Report distributed in January and July. The Program management team continues to explore additional channels to drive awareness such as social, event marketing and other cross-promotional opportunities. The creative team continues to drive engagement and interest in the program based on online survey results and enrollment. Core messaging remains simple and focused on key benefits—a free energy assessment from Duke Energy can help save energy and money while also increasing comfort and it only takes three easy steps (You Call, We Come Over, You Save).

Home Energy House Call program information and an online assessment request form are available at www.duke-energy.com.

F. Evaluation, Measurement and Verification

The next evaluation for the program is tentatively scheduled for a late fourth quarter 2020 delivery date. It is anticipated that the evaluation will consist of a billing analysis that will compare the consumption of program participants to future program participants. Engineering estimates for the HEHC kit measures will also be conducted to provide insight into the behavioral impacts achieved through the program and to provide impacts for the Additional Bulbs provided to program participants. Participants surveys will be used to determine in-service rates and determine free ridership at the measure level.

The process evaluation will consist of participant surveys which will identify barriers to participation, improve program processes and assess overall participant satisfaction.

Energy Efficient Appliances and Devices

A. Description

The Energy Efficient Appliances and Devices program ("Program") offers a variety of measures to eligible Duke Energy Carolinas, LLC (the "Company") customers to facilitate a reduction in their energy consumption. The Program includes offers for lighting measures, pool pumps, heat pumps water heaters, and water measures.

Free LED Program

The Free LED (Light Emitting Diode) program is designed to increase the energy efficiency of residential customers by offering customers 9 watt A19 LEDs to install in high-use fixtures within their homes.

The LEDs are offered through multiple channels to eligible customers, including an on-demand ordering platform which enables eligible customers to request LEDs and have them shipped directly to their homes.

The program consists of two types of eligible customers:

1. Customers who have not yet met or exceeded the Duke Energy bulb (CFL or LED) limit of 15. These customers have the option to choose kits in quantities of 3, 6, 8, 12, and 15 bulbs. Available order quantities presented are dependent on past campaign participation (i.e., coupons, Business Reply Cards ("BRCs") and other Company programs offering lighting).

2. Customers who have met or exceeded the 15-bulb limit (CFL or LED) but 5 years have passed since their shipment dates. Depending upon past order quantities, these customers could have the option to order bulbs in quantities of 6 or 12.

Customers have the flexibility to order and track their shipments through four separate channels:

1) Telephone: Customers may call a toll-free number to access the Interactive Voice Response ("IVR") system, which provides prompts to facilitate the ordering process. The IVR is designed to handle requests for both English- and Spanish-speaking customers. Customers may easily validate their accounts, determine their eligibility and order their LEDs over the phone.

2) The Program's Web Site: Customers can go online to order LEDs, check their order status, see eligibility requirements and view frequently asked questions.

3) My Account: Once enrolled and authenticated in My Account, eligible customers will have the ability to order LEDs, check their order status and view frequently asked questions.

4) Duke Energy Mobile App: Once a customer downloads and authenticates their account on the mobile app, if eligible, the customer will see a "card" within the app offering the program. Like the other channels, customers have the ability to track order status and view FAQs.

Specialty Lighting

The Duke Energy Savings Store ("Store") is an extension of the on-demand ordering platform enabling eligible customers to purchase specialty bulbs and have them shipped directly to their homes. The Store launched on April 26, 2013, and offers a variety Light Emitting Diodes lamps ("LEDs") including reflectors, globes, candelabra, 3-way, dimmable and A-line type bulbs. The incentive levels vary by bulb type, and the customer pays the difference. Various shipping promotions are run throughout the year, ranging from free to a reduced flat rate price.

The maximum number of incented bulbs the Company provides is 36 per account. However, customers may choose to order additional bulbs without the Company's incentive.

Energy Efficient Appliances and Devices

In 2018, the program added smart thermostats, smart strips, & water products. Customer purchase limits are as follows:

- Smart thermostats, 2 total
- Water measures, 3 total
- Smart Strips, 4 total

In 3Q of 2019, the program added the following additional energy efficient products:

- LED fixtures (direct wires, portable, & outdoor photocell), limit 8 total
- Small appliance, dehumidifiers & air purifiers, limit 2 each total

Customers can check eligibility and shop for specialty bulbs through four separate channels.

1) The Program Web Site: Customers can access the store via the program's public webpage on DukeEnergy.com. By clicking the "Shop Now" button, customers move to the store where they can purchase specialty bulbs. Frequently asked questions are available to help customers learn more about the program and the sustainability benefits of using LED lighting.
2) My Account (formerly OLS): Customers enrolled in the Company's OLS or My Account may visit the Store and purchase specialty bulbs. Upon login, eligible customers are intercepted with the Store offer. Customers can select "Shop Now" or "No Thanks." Additional links and promos within OLS also prompt customers to access the Store.
3) Phone Ordering: Customers can call a toll-free phone number provided on all promotional pieces for the program and place their orders over the phone directly with the programs third party vendor.
4) On occasion, Duke Energy provides customers with a mail-in option for placing an order. Direct mail campaigns offer specially priced bulb bundles with the option to order these bundles online, by phone or with a postage paid return mailer.

The Store is managed by a third-party vendor, Energy Federation Inc. ("EFI"). EFI is responsible for maintaining the Store website, fulfilling all customer purchases, supporting the program call center, and recommending products. The store's landing page provided information about the store, product offerings, highlights promotions, account information and order history. Support features include a toll-free number, chat, package tracking and frequently asked questions.

Educational information is available to help customers with their purchase decisions. This information includes videos and documents that speaks to how the customer can reduce their energy usage while maintaining comfortable atmosphere within their home.

Product pages include application photos, product images, product specifications, purchase limits, and program pricing. Customers may place items in their shopping carts to purchase later. Customers can pay for their purchases with a credit card or by check.

Benefits of the four distinct channels for the Savings Store include the following:

- Improved customer experience
- Advanced inventory management
- Simplified program coordination
- Enhanced reporting
- Increased program participation
- Reduced program costs
- Quick and convenient
- Discounted pricing

Energy Efficient Appliances and Devices

Retail Lighting

The Retail Lighting Program's primary objective is the reduction of electric energy consumption and peak demand through increased awareness and adoption of energy-efficient lighting technologies. The program partners with retailers and manufacturers across North and South Carolina to provide price markdowns on customer purchases of efficient lighting. The product mix includes Energy Star-rated standard, reflector, and specialty LEDs and fixtures. Participating retailers include a variety of store types, including Big Box, DIY, and discount stores.

The program promotes customer awareness and the purchase of program-discounted products through a range of marketing and outreach strategies, including in-store collateral and events, bill inserts, direct mail and email marketing, mass media advertising, online advertising, and community events. The program also provides training to store staff to enable better customer education at the point of purchase. Ensuring customers are purchasing the right bulb for the application through proper customer education is imperative to obtain high satisfaction with lighting products and subsequent purchases.

Water Measures

The Save Energy and Water Kit Program ("SEWK") launched in 2014. The Program is designed to increase the energy efficiency of residential customers by offering customers energy efficient water fixtures and insulating pipe tape for use within their homes.

The SEWK program is offered through a selective eligibility process, enabling eligible customers to request a kit and have it shipped directly to their homes. Customers owning and living in a single-family home with an electric water heater and who have not received similar measures through another Company-offered energy efficiency program are eligible for the program. Kits are available in two sizes for homes with one or more full bathrooms and contain varying quantities of shower heads, bathroom aerators, a kitchen aerator and insulating pipe tape. Program participants are eligible for one kit shipped free of charge to their homes. Also, customers are able to upgrade the showerhead(s) in the kit from a standard showerhead to either a wide pattern or wand showerhead at low cost.

Customers are pre-screened based on the eligibility requirements. Marketing channels include both a direct mail business reply card ("BRC") and direct email. Customers receiving the BRC may choose to return the BRC, navigate to a redemption website listed on the card, or call a toll-free number to take advantage of the offer. Customers receiving a direct email simply click on a redemption link to redeem the offer online. Upon receiving the order from the customer through one of the methods above, EFI ships the kit to the customer. Due to the unique eligibility requirements of this program, BRCs and direct email are the only two methods being used to solicit customers for participation.

High Efficiency Pool Pumps

The High Efficiency Pool Pumps measure ("Pool Energy Efficiency Program") is designed to encourage the purchase and installation of energy efficient variable speed pool pumps for residential in-ground swimming pools. Eligible customers receive an incentive of $300 for the replacement of an eligible single-speed pool pump with a new Energy Star-certified variable speed pump. New swimming pool construction is also eligible for the rebate. The program is marketed through a network of participating contractors ("Trade Allies") that interface directly with the customer, as well as through various marketing channels such as direct mail, email, company website, bill inserts and other customer communications. Eligible customers include single-family, owner-occupied residential customers with an in-ground pool in the Duke Energy Carolinas service territory. Builders of single-family residences are eligible for new residence construction that includes an in-ground swimming pool. In late 2017, this measure was moved to the Residential Smart $aver® Energy Efficiency Program (previously known as HVAC EE).

Energy Efficient Appliances and Devices

High Efficiency Heat Pump Water Heater

The high efficiency heat pump water heater measure is designed to encourage the installation and adoption of heat pump water heaters. Eligible customers receive an incentive of $350 for the replacement of an existing electric water heater with an Energy Star-certified heat pump water heater having an Energy Factor ("EF") rating of 2.0 or higher. The program is marketed through a network of participating contractors ("Trade Allies") that interface directly with the customer, as well as through various marketing channels such as direct mail, email, company website, bill inserts and other customer communications. Eligible customers include single-family, owner-occupied residential customers with electric water heating in the Duke Energy Carolinas service territory. Builders of single-family residences that include an eligible heat pump water heater are also eligible for the rebate. In late 2017, this measure was moved to the Residential Smart $aver® Energy Efficiency Program (previously known as HVAC EE).

Audience

Customers who meet the Program eligibility requirements.

B &C. Impacts, Participants and Expenses

Energy Efficient Appliances and Devices[1]

$ in millions, rounded	Vintage 2019 As Filed	Vintage 2019 YTD December 31, 2019	% of Target
NPV of Avoided Cost	$52.1	$102.1	196%
Program Cost	$21.7	$41.4	190%
MW	16.7	31.8	190%
MWH	97,320.5	187,351.7	193%
Units	3,997,670	9,893,466	247%

1) Values are reflected at the system level.

D. Qualitative Analysis

Free LED Program

Highlights
The program results were strong in 2019. Overall, over451,000 orders were placed accounting for 5.6 million bulbs.

From an order channel perspective, the IVR intercept was the ordering channel that accounted for the most orders (45%). This was followed by the My Account authenticated portal accounting for 30% of orders in 2019 the Duke Energy public website with 24% of orders while the program's newest channel, the Duke Energy Mobile App rounded out the rest of the order channel splits accounting for 1% of orders.

Issues
Analyzing customer data and finding ways to effectively market to non-participating customers is the primary challenge of this program.

Potential Changes
The Free LED program is scheduled to discontinue in Duke Energy Carolinas in 2020 as a result of potential efficiency standards for general service bulbs that may be imposed as a part of the Energy Independence and Security Act (EISA). This standard change legislation will diminish both the impact of the program and its cost effectiveness, making it, therefore, no longer viable for the company to offer it. Although, at this time, there is still uncertainty as to how and when this legislation will be imposed, Duke Energy plans to move forward with its sunsetting strategy. The Company will work collaboratively with the implementation vendor to manage inventory and process pipeline orders efficiently during this time.

Energy Efficient Appliances and Devices

Specialty Lighting

Highlights
The Online Savings Store, provides an ecommerce platform that allows customers to purchase a variety of energy efficient products, including LEDs, smart thermostats, smart strips and more, at any time. Over 43,578 orders were placed during 2019 resulting in the delivery of over 331,095 bulbs; 11,724 smart thermostats; 3,553 smart strips; 220 water products, 639 LED fixtures have been delivered to customers. Over 99 percent of customers accessed the online saving store via the public website, while 1 percent accessed by logging into their MyAccount.

Issues
Educating and bringing awareness to the variety of products in the Store to eligible customers is the program's primary issue.

Potential Changes
Upgrading the entire site to improve the overall customer shopping experience and enhance certain features is planned for 2020.

Retail Lighting

Highlights
In 2019, the program moved a total of 3,476,442 measures, including 2,404,709 LEDs and 1,071,733 fixtures into customers' homes.

The DEC Energy Efficiency Program had 9 lighting retail channels actively participating in 2019. While the top three retail channels account for 70% of the program sales, all retail channels are important in that they allow access to the program for a widely diverse and geographically spread population of DEC customers. Locations are selected to ensure that the Program reaches 90% of customers within 30 miles of a participating retail location.

The Program operated efficiently with 86.77% of overall Program costs going directly to customers in the form of incentives. Most of the remaining Program costs (12.92%) were spent on implementation and administration of the Program. The remainder of costs, less than 1%, were spent on marketing and labor.

Issues
No issues are known at this time.

Potential Changes
The Program will continue to evaluate the market and adjust products and incentive levels as necessary, focusing on specialty applications and strategically targeting underserved customers through select channels and events.

Save Energy and Water Kit Program

Highlights

In 2019, the program distributed over 409,000 measures. In 2Q 2019, the program enhanced the online ordering process to allow customers to upgrade the showerhead(s) in the kit from a standard showerhead to a wide format or wand showerhead. Online redemptions continue to grow and in 2019, accounted for 40% of all redemptions. Of customers that redeemed the offer online, 34% chose to upgrade their kit to either a wide format or wand showerhead.

Energy Efficient Appliances and Devices

Issues

The Company continues to analyze data from non-respondents to the BRC offer to identify opportunities to increase the adoption rate. The Company also continues to review customer satisfaction surveys to identify opportunities for improvement in service rates and overall customer satisfaction.

Potential Changes
The program continues to review the kit components to identify new measures that would provide customers with better product choices.

High Efficiency Pool Pumps

Highlights
The Company partnered with several wholesale distributors across North and South Carolina to serve as distribution channels for program awareness and to develop the Trade Ally Network. Trade Allies are important to the program's success because they interface with the customer during the decision-making process. Several training classes were conducted throughout the jurisdiction to continue educating the trade allies on the advanced technology variable speed as well as on how to sell the technology to the end user.

Issues
Customer buy-in and the Trade Ally network are vital to the success of the program. Educating contractors on emerging technologies and the value the technologies provide customers is critical in growing the trade ally network and their willingness to promote the program. Additionally, many distributors are requesting point-of-sale rebates as they do not want to deal with submitting rebates or handling the additional paper work requirements for the Program. The Company is currently working to determine if a technology can be put in place to accommodate distributor needs and boost participation.

High Efficiency Heat Pump Water Heater

Highlights
The Company has partnered with manufacturers and national retailers such as General Electric and Lowes to increase program awareness and maximize in store purchases. The program continued recruiting plumbing contractors and currently registered HVAC companies to increase coverage across the jurisdictions and maximize participation. The Program conducted training classes throughout the jurisdiction to educate the Trade Allies on the advanced technology offers for reducing energy consumption as well as on how to sell the technology to the end user.

Issues
Educating and bringing awareness of the program to both customers and potential contractors has been challenging. Educating contractors has been addressed through additional Trade Ally marketing, recruitment and training but remains slow due to the re-emerging technology of heat pump water heaters and their willingness to adopt more technical services. Customer awareness is being addressed through program design and marketing tactics but will be primarily targeted as a joint effort with manufactures and national retailers. Their willingness to co-brand and the frequency of campaigns will be critical in reaching our customer base.

E. Marketing Strategy

Free LED Program

Energy Efficient Appliances and Devices

The overall strategy of the program is to reach residential customers who have not adopted LED lighting. The Company educates customers on the benefits of LEDs while addressing barriers for customers who have not participated in the program. Additionally, the ease of Program participation will also be highlighted to encourage use of the on-demand ordering platform. The Free LED and Specialty Lighting offers utilize the same ordering platform so the Company can promote both lighting offers efficiently and bring awareness to non-adopters.

From an outreach standpoint, the program relies on our My Account intercept, a pop up that launches as a customer logs into the My Account authenticated portal to pay their bill or view account information, to generate interest in the program. A customer can click "continue" to move to the Free LED ordering page. In 2019, approximately 30% of orders came as a result of this intercept. In addition to the My Account intercept, the program leveraged it's IVR Intercept that presents when a customer calls into the Duke Energy customer service line and goes through one of three flows—Billing Questions, Meter Read, Make a Payment. After authenticating, if eligible, a message will present that they are eligible for the offer and allowing them to place an order and then be placed back into the flow of their intended call. Overall, there were 123,563 IVR intercept orders out of 456,509 times the intercept presented, translating to a 27% take rate.

In addition to the intercepts, the program also solicited customers via emails and direct mail pieces. Such pieces usually targeted New Customers (typically yielding an 18% take rate) and customers who became re-eligible for the Free lighting program after 5 years passed since their Free CFL order (typically yielding a 16% take rate).

A sample of program collateral and emails (which cross promote Specialty Lighting) are available in the Appendix.

Specialty Lighting
Since the launch of the Store, the marketing efforts include the following:

- bill messages
- bill inserts
- email campaigns
- direct mail
- and other digital media channels

Examples of the marketing pieces can be found in the Appendix. Awareness and education will continue to be a focus in collateral messages to eligible customers, as well as highlighting great pricing and other promotional offerings such as free shipping.

Retail Lighting
The program's marketing efforts for 2019 include the following:

- Point of Purchase materials at participating retailer locations
- Duke Energy and Program website
- General Awareness Campaigns
    - Bill Inserts
    - Email
    - Online Advertising

- Advertised events at key retailers including:
    - Direct mail
    - Email
    - In-Store materials (fliers, bag stuffers, posters, banners, etc.)

- Community outreach events (national night out, cultural events, etc.)

Energy Efficient Appliances and Devices

These marketing efforts are designed to create customer awareness of the Program, to educate customers on energy saving opportunities, and to emphasize the convenience of Program participation. Additionally, marketing efforts related to in-store events are designed to motivate customer participation.

Save Energy and Water Kit Program
The overall strategy of the program is to reach residential customers who have not adopted low flow water devices. In 2020, the program is exploring the use of bilingual messaging to reach Spanish-speaking customers.

Both direct mail marketing in the form of BRCs and direct email are the current marketing channels being used by this program in the Carolinas. With the growth of online ordering and email as a marketing channel, the paper and cost associated with traditional mail solicitations continues to decline.

High Efficiency Pool Pumps
The Company implemented several customer marketing campaigns in 2017 which leveraged channels such as email, paid search, display ads, direct mail and social media to build awareness of the program. Other channels such as co-branded retail displays with selected distributors created awareness of the program. The program's messaging was built around the benefits of the product including payback, annual savings and cleaner pools.

High Energy Efficiency Heat Pump Water Heater
The Company implemented several customer marketing campaigns in 2017 which leveraged channels such as bill inserts, paid search, and display ads to build awareness of the program. Other channels such as co-branded retail displays with selected manufacturers and national retailers created awareness for the program.

F. Evaluation, Measurement and Verification

Residential Lighting

No additional EM&V activities are planned for the Free LED Program due to future sunsetting of the program.

Future evaluations for the DEC Online Saving and Marketplace Program are tentatively scheduled for a final report date in the fourth quarter of 2021, subject to participation levels for the non-lighting retail and marketplace measures.

Heat Pump Water Heaters/Pool Pump

The evaluation for Heat Pump Water Heater and Variable Speed Pool Pump measures are scheduled for tentative delivery in mid-year 2022 for Program Year 2021. The extended timeframe is to ensure sufficient participation in the referral component of the program.

Save Energy & Water

Evaluation work commenced in 2019, with the final evaluation report tentatively scheduled for 2nd Quarter 2020.

Energy Efficient Appliances and Devices

G. Appendix

Free LED Program – Direct Mail New Customer Letter:

Free LED Direct Mail Campaign:

Energy Efficient Appliances and Devices

Free LED Program – Email Campaign:

Online Savings Store

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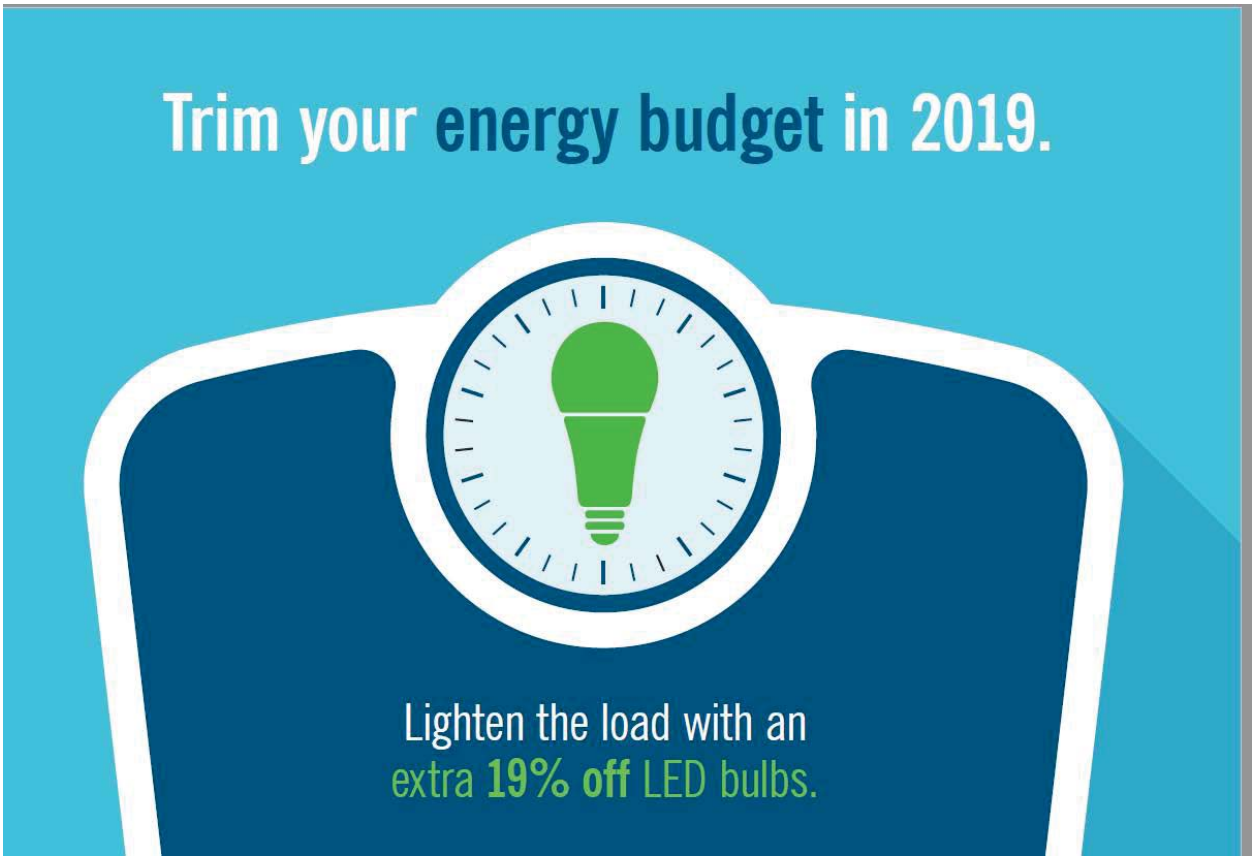
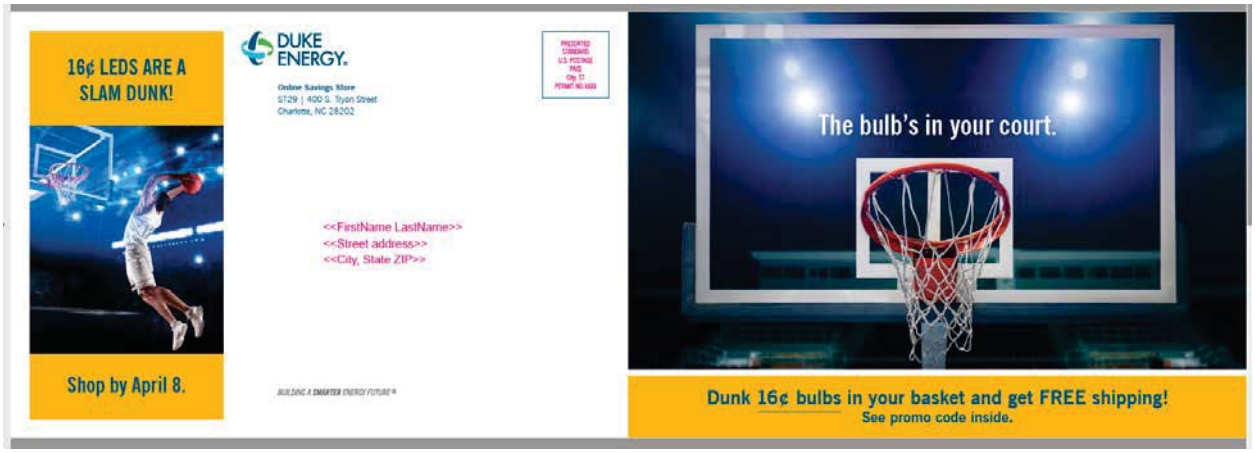
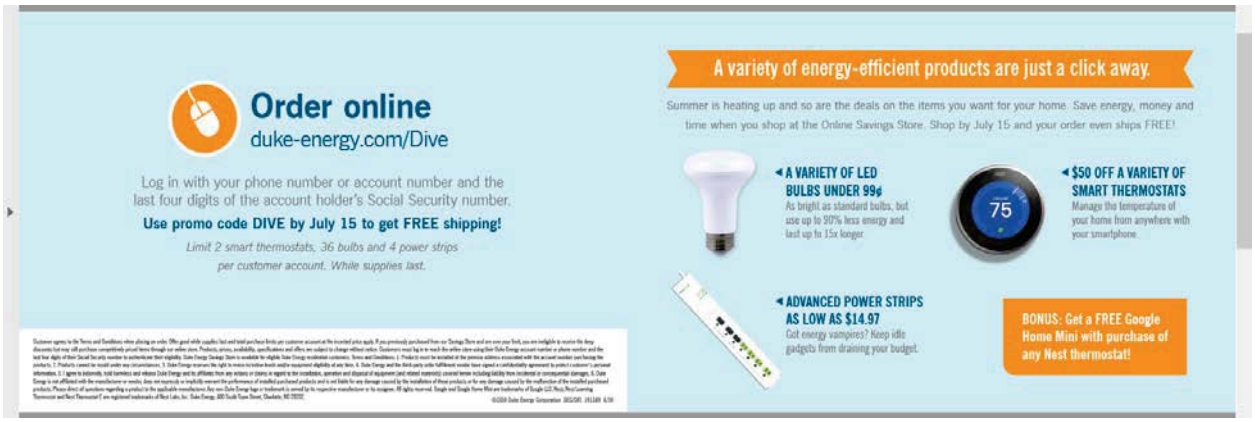
Energy Efficient Appliances and Devices

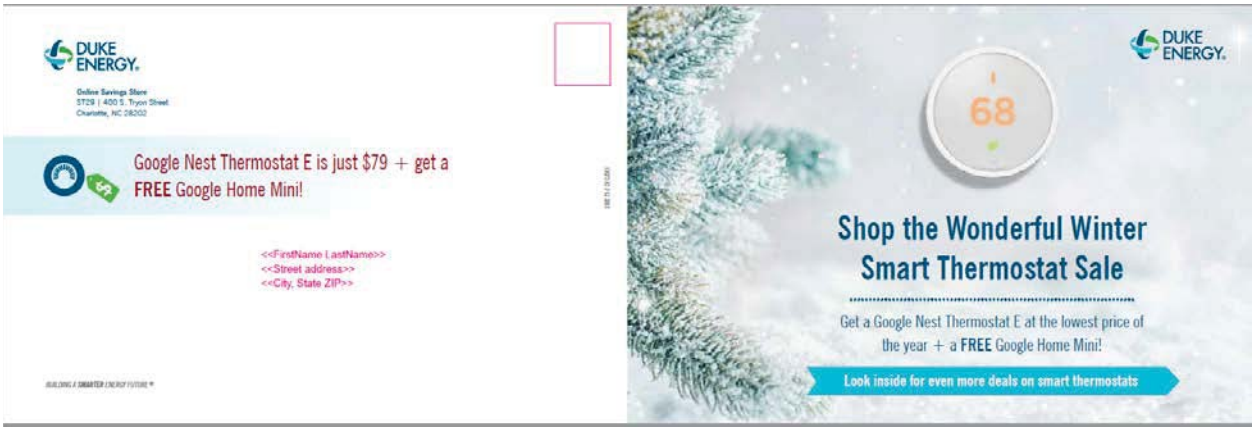




Energy Efficient Appliances and Devices

Energy Efficient Appliances and Devices





Energy Efficient Appliances and Devices

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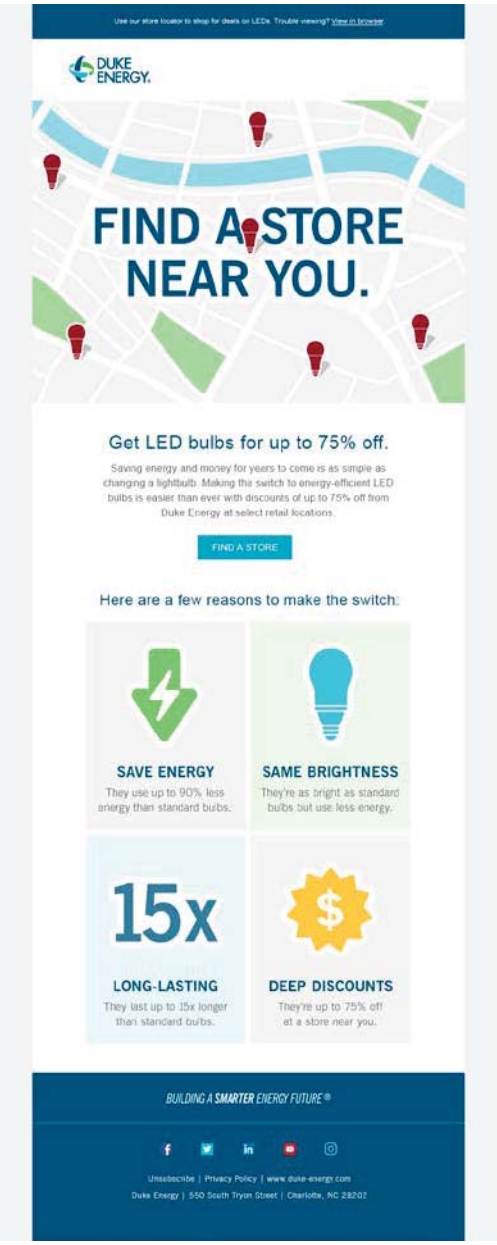
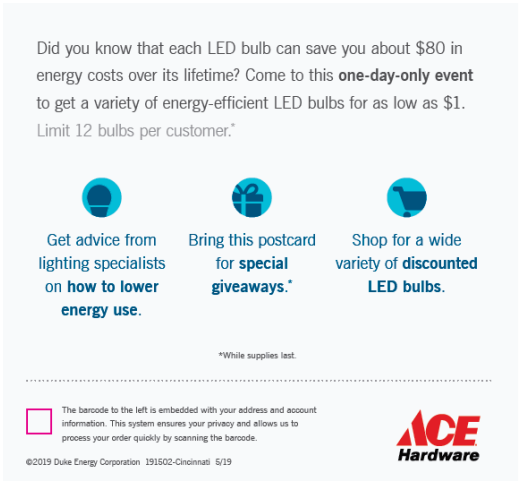
Retail Lighting General Awareness Email:

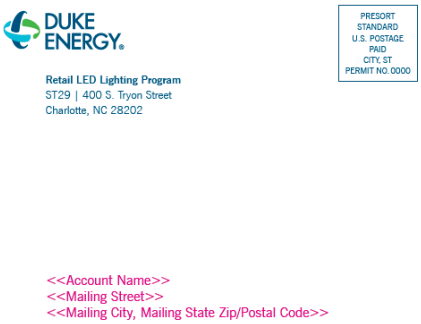
Energy Efficient Appliances and Devices



Retail Lighting In-Store event promotion:

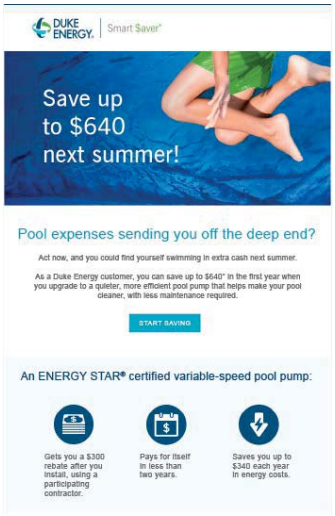
Energy Efficient Appliances and Devices



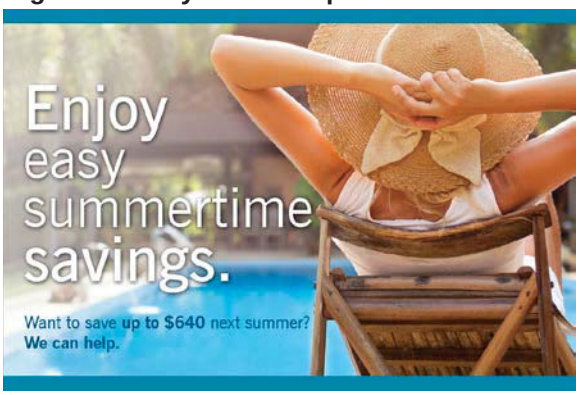


High Efficiency Pool Pump Digital Ad

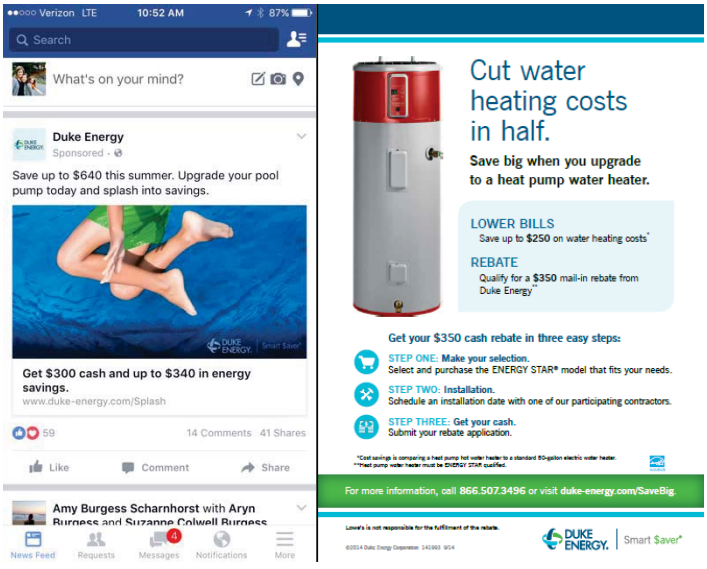
Energy Efficient Appliances and Devices



High Efficiency Heat Pump Water Heater National Retailer Display



High Efficiency Pool Pump Facebook Posting



High Efficiency Heat Pump Water Heater Digital Media

Energy Efficient Appliances and Devices

Residential –Smart $aver® Energy Efficiency Program

A. Description

The Residential – Smart $aver® Energy Efficiency Program ("Program") offers measures that allow eligible Duke Energy Carolinas, LLC (the "Company") customers to reduce energy consumption in the home. The Program provides incentives for the purchase and installation of eligible central air conditioner or heat pump replacements in addition to Wi-Fi enabled Smart Thermostats when installed and programmed at the time the heating ventilation and air conditioning (HVAC) system is installed. Program participants may also receive an incentive for attic insulation, air sealing, duct sealing, variable speed pool pumps, and heat pump water heaters.

Program staff is responsible for establishing relationships with HVAC and home performance contractors ("Trade Allies") who interface directly with residential customers. These Trade Allies market and leverage the Program to assist with selling these products and services to customers. Once the Trade Ally has sold the service/product, they complete and submit incentive applications on behalf of the customer. An incentive is disbursed to the customer after the application has been approved and processed.

Duke Energy contracts with a third-party vendor for application processing, incentive payment disbursement, and Trade Ally and customer call processing.

Audience

The Company's residential customers that meet the eligibility requirements of the Program may participate.

B &C. Impacts, Participants and Expenses

Residential - Smart $aver Energy Efficiency Program[1]

$ in millions, rounded	Vintage 2019 As Filed	Vintage 2019 YTD December 31, 2019	% of Target
NPV of Avoided Cost	$4.5	$7.1	157%
Program Cost	$4.8	$7.4	154%
MW	1.3	2.0	157%
MWH	5,130.7	7,329.1	143%
Units	9,630	25,852	268%

1) Values are reflected at the system level.

D. Qualitative Analysis

Highlights

The Company's tiered incentive structure continues to receive a positive reaction from customers as well as Trade Allies. Reporting continued to show that the increased incentive amounts for higher SEER equipment has encouraged customers to install higher efficiency equipment as well as having it managed with newer thermostat technologies.

The program will continue to emphasize best practices and to build support by offering additional training to the Trade Allies and modifications to program requirements when needed. Program staff coordinated and assisted in 3 onsite field trainings and 2 webinars during 2019 as well as 2 contractor appreciation events.

Customer engagement continues to be a focus of the Program especially through the "Find It Duke referral platform that positions Duke Energy as a trusted advisor by providing free home improvement referrals through a premier network of qualified contractors who deliver exceptional customer service.

Residential –Smart $aver® Energy Efficiency Program

In September 2019, major enhancements to the Find it Duke website were completed that expanded the services offered and provided an improved customer experience. The Find it Duke referral channel successfully generated over 15,668 customer referrals during 2019. Customers whose referral generated a sale for the Trade Ally received a survey to rate their experience. The Referral Network maintained a contractor rating of 4.75 out of 5.0 stars during 2019.

Issues

The buy-in and participation of the Trade Ally network is vital to the success of the Program. Trade Allies are important to the Program's success because they interface with the customer during the decision-making event.

E. Marketing Strategy

Promotion of the rebate Program is targeted to HVAC and home performance contractors as well as pool and plumbing contractors that install variable speed pumps and heat pump water heater technology.

Program information to educate customers about the Program and encourage participation and Trade Ally enrollment links are available on the Program's website. Increasing the overall awareness of the Program and the participation of Trade Allies ensures more customers are considering the benefits of the Program at the time of purchase.

Various customer marketing campaigns during 2019 leveraged channels such as TV, radio, social media and email messaging in order to build awareness of the referral service. Other marketing efforts, such as a paid search and co-branded special offer campaigns with eligible referral contractors, manufacturers, and national retailers, also created awareness for the channel.

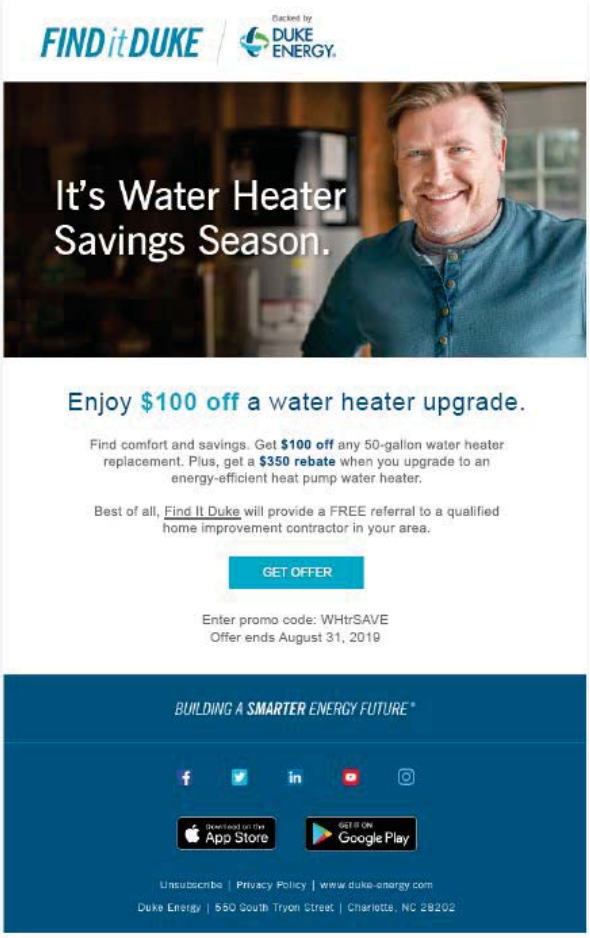
F. Evaluation, Measurement and Verification

No evaluation activities were completed in 2019. The next evaluation for the program will commence in second quarter of 2021 with a completed report scheduled for Second Quarter 2022.

Residential –Smart $aver® Energy Efficiency Program

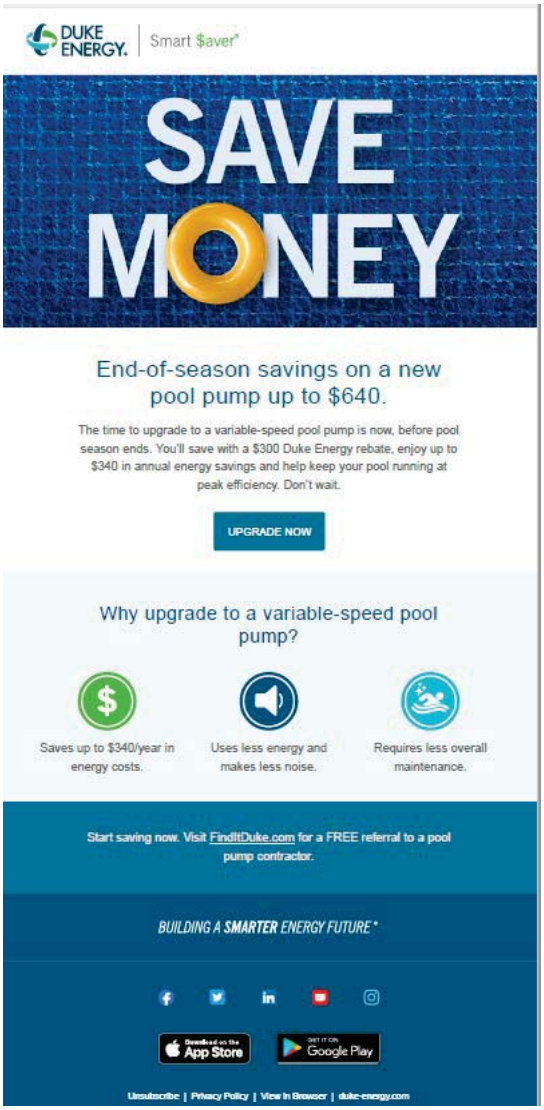
G. Appendix

Residential HVAC and Heat Pump Water Heater– Referral Special Offer Campaigns

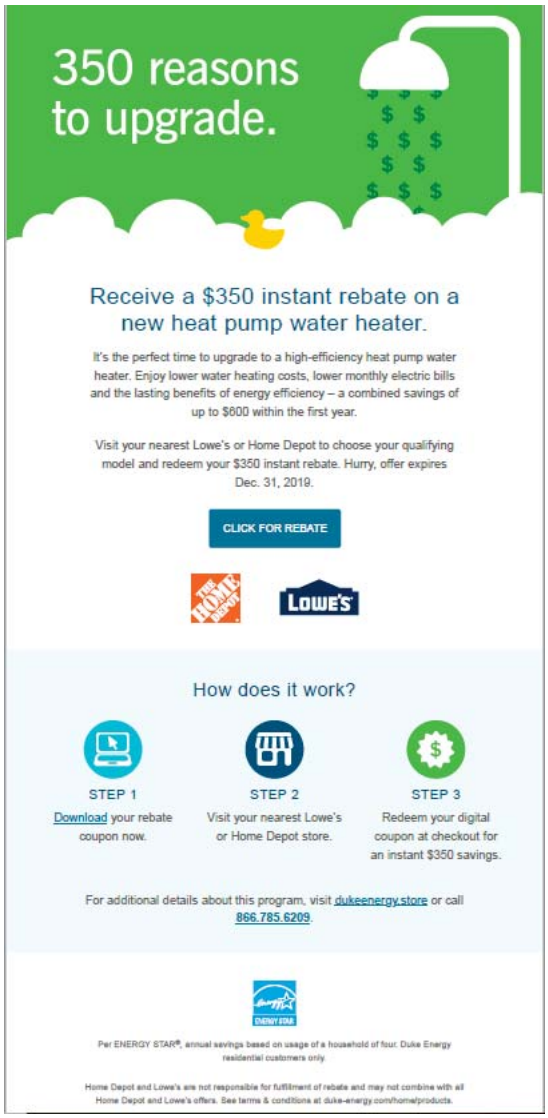


Residential –Smart $aver® Energy Efficiency Program

Residential Pool Pump- Email Campaign



HPWH Partnership - Email Campaign



Residential –Smart $aver® Energy Efficiency Program

Social Ads

Digital ads

Creative: HPWH

Multi-Family Energy Efficiency Program

A. Description

The Multi-Family Energy Efficiency program ("Program") provides energy efficient lighting and water measures to reduce energy usage in eligible multi-family properties. The Program allows Duke Energy Carolinas, LLC (the "Company") to utilize an alternative delivery channel which targets multi-family apartment complexes. The measures are installed in permanent fixtures by Franklin Energy, the program administrator. Franklin Energy oversees all aspects of the Program including outreach, direct installations, and customer care.

The Program helps property managers save energy by offering energy efficient lighting and water products. The Program offers LED lighting measures including A-lines, globes, candelabras, recessed, and track bulbs, and energy efficient water measures such as bath and kitchen faucet aerators, water saving showerheads, and pipe wrap. Water measures are available to eligible customers with electric water heating. These measures assist with reducing maintenance costs while improving tenant satisfaction through lower energy bills.

The Program offers a service where Franklin Energy installs the lighting and water measures during scheduled visits. Crews carry tablets to keep track of which measures are installed in each apartment.

After installations are completed, Quality Assurance ("QA") inspections are conducted on 20 percent of properties that completed installations in each month. The QA inspections are conducted by an independent third party. Any QA adjustments are provided to the Company to update participation records.

Audience

The target audience is property managers who have properties served on individually metered residential rate schedules. To receive water measures, apartments must have electric water heating.

Properties that have already been served by the Property Manager CFL program are only eligible for water measures and specialty LED bulbs. However, properties with CFL installations over 5 years old are eligible for all the new LEDs and water measures. Lighting measures are only installed in permanent lighting fixtures such as ceiling lights, recessed lighting, track lighting, ceiling fan lights, and bathroom vanity lighting.

B &C. Impacts, Participants and Expenses

Multi-Family Energy Efficiency[1]

$ in millions, rounded	Vintage 2019 As Filed	Vintage 2019 YTD December 31, 2019	% of Target
NPV of Avoided Cost	$9.6	$11.9	124%
Program Cost	$3.4	$3.7	109%
MW	2.0	2.6	132%
MWH	19,846.4	24,086.2	121%
Units	342,660	493,307	144%

1) Values are reflected at the system level.

D. Qualitative Analysis

Highlights

Through December 2019, the Program completed installations at 293 properties, accounting for over 46,422 units. The Program installed 493,307 measures with lighting representing 72% of the measures and water measures representing the remaining 33%. In 2019, the Program successfully added new 4,000 Kelvin LED bulb options to the offering for A-line fixtures, which have been requested by property

Multi-Family Energy Efficiency Program

managers. In 2019 the Program successfully added 0.5 GPM bath aerators at the request of property managers.

Issues

There are no issues to report now.

Potential Changes

In early 2020, the Program is planning to add 1.25 GPM showerheads and review additional 4,000 Kelvin bulb types for addition to the program. Program Management continues to evaluate new energy efficient measures for addition to the program.

New technology enhancements are being implemented to increase the accuracy of recording the measures installed and the bulb wattages removed, to increase efficiencies with scheduling units, and to improve the tracking of new opportunities from both the direct installers and energy advisors.

E. Marketing Strategy

As program implementer, Franklin Energy is responsible for marketing and outreach to property managers in the Company's service territory. Marketing is primarily done through outbound appointment setting calls, industry trade events, and on-site visits to gauge initial interest in the program. The Program staff also utilizes local apartment association memberships to obtain access to contact information for local properties and attends association trade shows or events to promote the program. The Program was an exhibitor in the 2019 AANC Conference in Raleigh, NC and generated over 50 leads for the region.

A Multi-Family Energy Efficiency public website landing page is available for property managers to learn more about the Program. A program brochure and a frequently asked question sheet are available for download.

Other ways a property manager may learn more about this Program are through the MyDuke Portal, an online tool used to pay the utility bills of vacant units at their property. The MyDuke Portal presents a promo link that directs the user to the Program website for more information.

Once enrolled, Franklin Energy provides property managers with a variety of marketing tools to create awareness of the Program among their tenants. The tools include letters to each tenant informing them of energy efficient measures being installed and of when the installations are taking place. Tenants receive educational leave-behind brochures when the installation is complete. Feedback from both property managers and tenants is important for the Program's continued success. Property managers are provided with leave-behind materials about the program which also includes survey for them to complete and return. For tenants, the educational leave-behind brochure includes a satisfaction survey to return to Duke Energy. Online versions of both the Program Manager and Tenant surveys are also available.

After the installation, window clings are placed in strategic areas throughout the property, specifically in the common areas entry and on each residential building on site (to the extent applicable). Using the window cling ensures that the program and Duke Energy are recognized long after the installation has taken place.

Multi-Family Energy Efficiency Program

F. Evaluation, Measurement and Verification

The combined DEC/DEP EM&V evaluation began in April of 2018. The evaluation will determine the net annual energy and demand associated with the program participants between January 1, 2017, and May 1, 2018. The evaluator will use a combination of surveys, on site data collection, a lighting logger study, and engineering analysis to determine the impacts for the program.

The evaluator ultimately determined that the initial logger deployment was not representative of the population during the sample period. As a result of the evaluators conclusions, loggers were redeployed to a new set of participants more representative of the population. Completion of updated impacts, which will include the new logger deployment results is scheduled for the first quarter of 2020.

Multi-Family Energy Efficiency Program

Appendix

Program Brochure-

Updated to add Commercial Offerings partnership and new water measures

Multi-Family Energy Efficiency Program

FAQ for Property Managers

What does the install process look like?
On your scheduled installation days, our team will arrive at 8:45 a.m. to begin working by 9 a.m. A member of your staff will need to accompany our installers and handle keys throughout the installation process. The time spent in each unit varies depending on the layout and products being replaced. We will leave a flyer for each resident explaining what was installed and a survey providing an opportunity to give us feedback. It's that simple and that fast!

How do we qualify?
Your property's electric utility must be Duke Energy to qualify. Additional qualifications depend on several factors such as metering, existing products, and method for water heating. To see which offerings your property qualifies for, you will need to schedule a complimentary energy assessment with one of our Energy Advisors by calling **888.297.1671** or emailing **dukeenergymultifamilyeep@franklinenergy.com**.

How much does it cost?
NOTHING! This program is part of many programs Duke Energy offers its customers from funds set aside to help reduce energy use. There are two parts to our program: residential (inside tenant units) and commercial (common areas). There are no limits on how many products we can install. Your Energy Advisor will go over your qualifications during the energy assessment.

What safety precautions should we know before installation?
As we are going through the units, if there are any unsecured pets or unattended minors, we will not be able to enter to perform the installation. During product installation, we ask that all small children be kept at a safe distance from the installers. The installers will provide further direction once on-site.

What is the next step?
Call **888.297.1671** or email **dukeenergymultifamilyeep@franklinenergy.com** to schedule an appointment for an energy assessment.

This program is administered by Franklin Energy, a contractor of Duke Energy with experience in the installation of home energy-saving products.

Contact us today!

Phone
888.297.1671

Website
duke-energy.com/multifamily

Email
dukeenergymultifamilyeep@franklinenergy.com

Note that this program is administered by Franklin Energy, a contractor of Duke Energy with experience in the installation of home energy-saving products.

DUKE ENERGY.

Multifamily Energy Efficiency Program

It's what's on the inside that counts.
Our **FREE** energy-saving lightbulbs and water-saving devices can help your tenants save money.

DUKE ENERGY.
BUILDING A SMARTER ENERGY FUTURE®

Start saving now with the latest **FREE** energy-saving products.

Multifamily Energy Efficiency Program
If you are a Duke Energy customer, your tenants may receive the following energy-saving products – installed in each multifamily unit and qualifying common areas at no cost.

Standard, Globe, Candelabra, Recessed and Track LEDs

Use **up to 90% less energy** and **can save at least $80** over their lifetime in energy costs compared to traditional incandescent bulbs. A popular residential option, ENERGY STAR® light-emitting diodes, or LEDs, can be installed in bathrooms, track lights, ceiling fans, recessed lights and other high-usage permanent fixtures.

Exit Sign LEDs

Exit signs are necessary to keep us safe. We can help you save on operating and labor costs by replacing incandescent exit sign bulbs with LEDs.

Bathroom and Kitchen Faucet Aerators

Use **up to 55% less water** than traditional 2.2-gallons-per-minute (gpm) faucets, which can reduce water and sewer costs, as well as the amount of energy used to heat the water.*

Outer ring allows for adjustable flow

*If water is heated by electricity, savings are not guaranteed.

Water-saving Showerheads

Use **up to 40% less water** than traditional 2.5-gpm showerheads, which can reduce water and sewer costs, as well as the amount of energy used to heat the water.*

Outer ring allows for adjustable flow

Hot Water Pipe Wrap

Reduces water and energy use by preventing heat loss while hot water travels through your building's pipes.*

This program is administered by Franklin Energy, a contractor of Duke Energy with experience in the installation of home energy-saving products.

DUKE ENERGY.

See what other property managers had to say.

You guys got top marks
"I received the satisfaction survey and filled it out. You guys got top marks. I received a lot of compliments about how friendly and professional you all were. Thank you again for all that you did!"
- Asheville Property Manager

They were so polite and professional
"I just wanted to let you know that your team did a wonderful job installing the energy-saving products. They were so polite and professional, which made the residents feel more at ease with the installation. I really appreciate all the hard work that went into making this project run so smoothly. We are now officially energy efficient!"
- Raleigh Property Manager

The program has been a huge success and very much appreciated
"The thing that stood out most for me is your willingness to contact all property managers in my district. You took control of the program and scheduled each property efficiently and effectively, resulting in less work for each property. The program has been a huge success and very much appreciated by the management company, properties and our residents. Thank you for your hard work!"
- Durham Property Management Company

Multi-Family Energy Efficiency Program

Sorry We Missed You
Door post-it

Multi-Family Energy Efficiency Program

Property Manager Direct Mail Piece

Sign up today!
Phone 888.297.1671 | **Website** duke-energy.com/multifamily
Email dukeenergymultifamilyeep@franklinenergy.com

DUKE ENERGY.
BUILDING A SMARTER ENERGY FUTURE®

Our **FREE** energy-saving lightbulbs and water-saving devices can help your tenants save money!

DUKE ENERGY.

Address
City, ST ZIP XXXXX

Use less energy, help your tenants save money and receive **FREE** products throughout your property by signing up for the Duke Energy Multifamily Energy Efficiency program. Your multifamily property can receive a **FREE** energy assessment, plus **FREE** energy-saving products installed in each unit and qualifying common areas – at no cost:

- Standard, globe, candelabra, recessed and track LEDs
- Bathroom and kitchen faucet aerators
- Exit-sign LEDs
- Showerheads
- Hot-water pipe wrap
- Comparable assessments could cost $1,000-$3,000

Scan me

Sign up today!
Phone 888.297.1671
Website duke-energy.com/multifamily
Email dukeenergymultifamilyeep@franklinenergy.com

Multi-Family Energy Efficiency Program

Case Study

MULTIFAMILY ENERGY EFFICIENCY PROGRAM CASE STUDY

ESTIMATED SAVINGS FOR RESIDENTS

Annual Electric Savings	Annual Electric Bill Savings
1,015 kWh	$107

Value and Savings for Bell Partners and Its Residents Through 2018

Annual Electric Savings	Value of Products and Energy Savings
2,771,664 kWh	$434,089

Going Green Makes a Difference

So far Bell Partners and Duke Energy have delivered energy savings equivalent to:	Cars Taken Off the Road	Trees Planted
	314	37,653

DUKE ENERGY AND BELL PARTNERS ARE GOING GREEN!

To date, Bell Partners and Duke Energy have collaborated to make nine communities more energy efficient by replacing standard lighting with LED bulbs, replacing inefficient faucets and showerheads with water-saving products, and insulating hot water heater pipes. The cost to Bell Partners and its residents? Nothing!
In 2017 and 2018, Duke Energy provided and installed:

- $152,000 worth of energy-saving products
- Over 26,000 LED lights
- Nearly 5,600 water-saving faucet aerators
- Over 1,800 energy-saving showerheads
- Nearly 14,000 feet of pipe insulation

Bell Partners residents can save an average of $107 annually on their electric bill. The communities save ongoing O&M expenses. And with the help of Duke Energy, Bell Partners continues to be a leader in the green multifamily market.

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BELL PARTNERS
APARTMENT INVESTMENT & MANAGEMENT

Power Manager®

A. Description

Power Manager® ("Program") is a demand response program that cycles residential central air conditioning to ensure power reliability during high summer peak demand periods. Duke Energy Carolinas, LLC (the "Company") installs a load cycling device near the outdoor unit of a qualifying air conditioner. This enables the customer's air conditioner to be cycled off and on when the Company initiates a control event. During these events, the Company can perform cycling or full shed interruptions of participating customers' air conditioning systems at any time to mitigate capacity constraints in the generation, transmission or distribution systems.

Program participants receive a financial incentive as a bill credit in the amount of $8 per month from July through October ($32 annually).

The customer's air-conditioning system experiences no adverse impacts because the load control device has built-in safeguards to prevent the "short cycling" of the air-conditioning system. Cycling simply reduces the amount of time the air-conditioning system runs in a given period. Additionally, the indoor fan continues to run and circulate air during the cycling event.

Audience

The Program is available to the Company's residential customers residing in owner-occupied, single-family residences with a qualifying central air-conditioning unit.

B & C. Impacts, Participants and Expenses

PowerManager[1]

$ in millions, rounded	Vintage 2019 As Filed	Vintage 2019 YTD December 31, 2019	% of Target
NPV of Avoided Cost	$60.8	$69.8	115%
Program Cost	$14.1	$13.4	95%
MW[2]	534.4	568.2	106%
MWH	0.0	N/A	-
Units[3]	503,131	535,704	106%

Notes on Tables:

1) Values are reflected at the system level.

2) MW capability at the generator derived from the average reduction during the May - September control season achieved by a full shed of participating air conditioners. At month-end December 2019, we had the ability to shed 568.2 MW (at the plant), representing 106% of the as filed capability.

3) Units included in filing represent average kW at the meter during the May - September control season. YTD value is based on 286,473 Power Manager devices at month-end December 2019.

D. Qualitative Analysis

Working in collaboration with Nexant, the Program's evaluator, Power Manager events were conducted on eight days during the summer of 2019. Prior to these events, the Company conducted several test events to ensure system readiness.

Nexant developed a variety of measurement and verification event scenarios based on: different start and end times, varying durations, cycling and emergency full shed control, and holding out different sub-groups during events to serve as control groups. These EM&V events were conducted on July 15 and 19, August 9 and 19, and September 9, 12, 17 and 26.

In 2019, the Company continued targeted load control device inspections based on analysis of interval usage data collected from smart meters on participating customers' homes during Power Manager events. Homes whose energy use did not change as expected were identified for follow up. These targeted inspections continued to produce very successful results.

Power Manager®

In years past, the Company used a selected a sample of participating customers to conduct field investigations. The number of inspections that would have been conducted under the prior approach were reduced by over half using the new targeted inspections. In doing so, substantial savings and the following increases as a percentage of completed inspections were achieved:

- 3X as many disconnected Power Manager devices were reconnected.
- 2X as many missing devices were replaced.
- 2.5X as many nonfunctioning devices were replaced.

Continued use of targeted inspections will improve the overall program performance and effectiveness for years to come.

E. Marketing Strategy

Outbound telephone calls were the Program's primary marketing channel with 15,619 customer enrollments for the year, resulting in 102% of goal. Power Manager was featured in the March MYHER home energy report.

At year-end, there were 238,057 customers (NC: 180,513 and SC: 57,544) and 286,473 air conditioners (NC: 216,490 and SC: 69,983) on the program; net increases of 8,682 customers (+3.8%) and 10,794 air conditioners (+3.9%).

At the start of the summer season, Power Manager customers were mailed postcards:

- Reminding them of their participation in the program
- Thanking them for making a difference
- Explaining how Power Manager works, its benefits, tips and other information

Program information and an enrollment form are available to customers on the Power Manager website located at http://www.duke-energy.com/north-carolina/savings/power-manager.asp.

F. Evaluation, Measurement and Verification

Results for the Summer 2019 Power Manager program are tentatively scheduled for completion in the second quarter of 2020. The impact evaluation will measure the average and aggregate load reductions for each summer 2019 event and average 2019 event; determine the impacts for each cycling strategy; estimate the capability of the program under peak conditions; and compare the impacts of AMI versus data loggers.

The process evaluation will uncover opportunities to improve the program operations, assess satisfaction or dissatisfaction among program participants, and identify program strengths and weaknesses.

G. Appendix

Power Manager®

Residential Home Energy Report

Paper Version

Earn money. Help the environment.

Get up to **$32 off your summer bills** with **Power Manager**.
Power Manager helps:

- **Preserve natural resources**
- **Delay** the need for **more power plants and transmission lines**
- **Prevent** the use of older, **less efficient power plants**
- **Keep energy costs low** for everyone

Learn more at **duke-energy.com/GetReward**.

Email Version

Earn money. Help the environment.

Get up to **$32 off your summer bills** with **Power Manager**.
Power Manager helps:

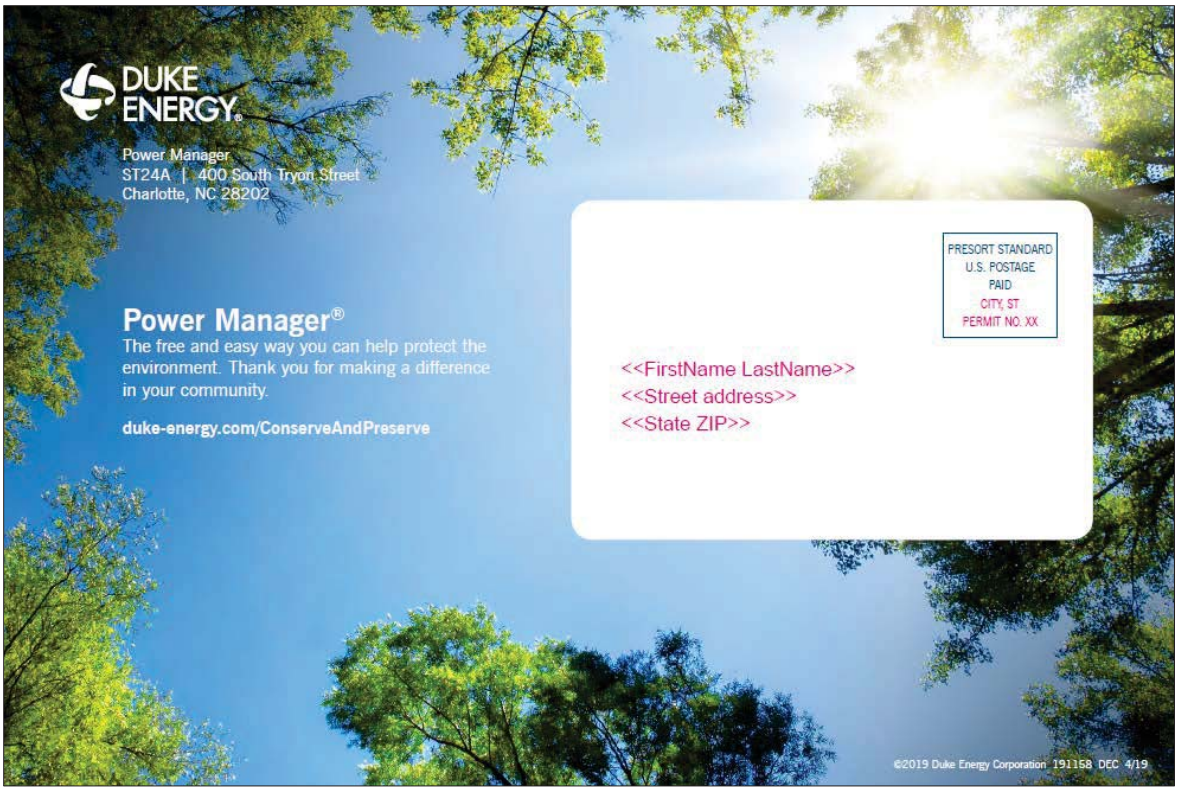
- **Preserve natural resources**
- **Delay** the need for **more power plants and transmission lines**
- **Prevent** the use of older, **less efficient power plants**
- **Keep energy costs low** for everyone

To learn more, click the button below.

Learn More

Reminder/Thank You Postcard

Power Manager®



Your participation in Power Manager is helping to:

- Use natural resources wisely
- Delay the need for more power plants and transmission lines
- Keep energy costs low for everyone

duke-energy.com/ConserveAndPreserve

Power Manager has been making a difference in the Carolinas for 40 years.

Thank you for being a part of it.

When outside temperatures are extreme, the demand for energy spikes and our systems must work extra hard to keep up. This can put a strain on the energy grid, requiring us to find sources to meet that increased demand. One option for meeting energy needs is starting up additional power plants where electricity is generated by fossil fuels.

By joining Power Manager, you've taken a meaningful step to reduce overall demand, keep energy prices low, and preserve natural resources by delaying the need (and greenhouse gas emissions) of additional power plants. Plus, you'll be rewarded with up to $32 in bill credits.

Power Manager is a win-win-win for you, your community and the environment.

For more information:

To find out if a Power Manager event is underway, call **800.832.3169**.

For questions or if your device is damaged or disconnected, call us at **888.463.5022** to service it for free.

DUKE ENERGY.

*BUILDING A **SMARTER** ENERGY FUTURE®*

A. Description

The purpose of Duke Energy Carolinas, LLC's (the "Company's" or "DEC") Small Business Energy Saver program (the "Program") is to reduce energy usage through the direct installation of energy efficiency measures within qualifying small non-residential customer facilities. All aspects of the Program are administered by a single Company-authorized vendor. Program measures address major end uses in lighting, refrigeration, and HVAC applications.

Program participants receive a free, no-obligation energy assessment of their facility and a recommendation of energy efficiency measures along with the projected energy savings, costs of all materials and installation, and up-front incentive amount from the Company. If the customer decides to move forward with the proposed project, the customer will make the final determination of which measures will be installed. The vendor then schedules the measure installation by electrical subcontractors at a time convenient for the customer.

The Program is designed as a pay-for-performance offering, meaning that the Company-authorized vendor administering the Program is compensated only for energy savings produced through the installation of energy efficiency measures.

Audience

The Program is available to existing non-residential customers that are not opted-out of the Company's Energy Efficiency Rider. Program participants must have an average annual demand of 180 kW or less per active account.

B & C. Impacts, Participants and Expenses

Small Business Energy Saver[1]

$ in millions, rounded	Vintage 2019 As Filed	Vintage 2019 YTD December 31, 2019	% of Target
NPV of Avoided Cost	$37.9	$25.7	68%
Program Cost	$14.6	$11.4	78%
MW	14.5	9.2	63%
MWH	75,258.1	53,674.2	71%
Units[2]	61,700,000	51,421,356	83%

1) Values are reflected at the system level.

2) Units reflect gross kWh.

D. Qualitative Analysis

Highlights

Lime Energy is the Company-authorized vendor administering the Program in both DEC and DEP service areas.

In 2019, the Company implemented a modification to the Program incentive design to offer higher, tiered incentives for deep energy retrofit projects with multiple measure technologies, actively incentivizing customers to undertake efficiency upgrades beyond lighting. Ultimately, the Company would like for the Program to encourage customers to take on more comprehensive energy efficiency upgrades to maximize energy savings. The goal was to reduce projects that just completed lighting measures from previous program years. The tiering was successful reducing the lighting only projects from over 80% in previous years to 53% in 2019.

The Company has administered a customer satisfaction survey to Program participants since the Program's launch in DEC. The survey during 2019 was changed to be a net promotor school from just

measuring customer satisfaction. The new survey changes reported data from past program years. Overall the new survey results still show that program participants overwhelmingly view Duke Energy in a positive light after participation in the Program.

Issues

While LED lighting measures are expected to remain the primary driver of kWh savings in the Program for the foreseeable future, the Company has been actively working with our vendor Lime Energy to implement initiatives focused on increasing refrigeration and HVAC measure adoption.

Potential Changes

As the Program matures, the Company will continue to evaluate opportunities to add incentivized measures which fit the direct install program model and are suitable for the small business market. In addition, the Company is also looking at possible modifications that would allow customers to participate in an Efficiency as a Service payment model were the energy savings would be used to pay off the project cost reducing the financial impact to customers with limited available funds.

E. Marketing Strategy

The Program is marketed primarily using the following channels:

- Lime Energy field representatives
- Direct mail (letters and postcards to qualifying customers)
- Duke Energy Carolinas website
- Social media and search engine marketing
- Email & Duke Energy Business E-Newsletters
- Direct marketing & outreach via Program administrator
- Outreach via Duke Energy Business Energy Advisors
- Community events

All marketing efforts are designed to create customer awareness of the Program, to educate customers on energy saving opportunities and to emphasize the convenience of Program participation for the target market.

F. Evaluation, Measurement and Verification

No evaluation activities occurred in 2019. Future evaluation activities and timing will be determined at a later date.

Non-Residential Smart $aver Prescriptive

A. Description

The Non-Residential Smart $aver® Prescriptive Program ("Program") provides incentives to Duke Energy Carolinas, LLC's (the "Company's") commercial and industrial customers to install high efficiency equipment in applications involving new construction and retrofits and to replace failed equipment. The program also uses incentives to encourage maintenance of existing equipment in order to reduce its energy usage. Incentives are provided based on the Company's cost effectiveness modeling to ensure cost effectiveness over the life of the measure.

Commercial and industrial customers can have significant energy consumption but may lack an understanding of the benefits of high efficiency alternatives. The Program provides financial incentives to help reduce the cost differential between standard and high efficiency equipment, offer a quicker return on investment, save money on customers' utility bills so it can be reinvested in their businesses, and foster a cleaner environment. In addition, the Program encourages dealers and distributors (or market providers) to stock and provide these high efficiency alternatives to meet increased demand for the products.

The Program promotes prescriptive incentives for the following technologies – lighting, HVAC, pumps, variable frequency drives, food services, process and information technology equipment.

Audience

All of the Company's non-residential opt-in customers billed on an eligible Duke Energy Carolinas rate schedule may participate.

B & C. Impacts, Participants and Expenses[1]

Non Residential Smart Saver Prescriptive[1]

$ in millions, rounded	Vintage 2019 As Filed	Vintage 2019 YTD December 31, 2019	% of Target
NPV of Avoided Cost	$84.3	$103.6	123%
Program Cost	$27.8	$23.7	85%
MW	23.6	30.0	127%
MWH	160,730.5	158,072.3	98%
Units	14,784,792	8,510,436	58%

1) Values are reflected at the system level.

Non Residential Smart Saver Energy Efficient Food Service Products[1]

$ in millions, rounded	Vintage 2019 As Filed	Vintage 2019 YTD December 31, 2019	% of Target
NPV of Avoided Cost	$5.4	$0.4	7%
Program Cost	$2.0	$0.3	17%
MW	1.2	0.1	7%
MWH	10,601.9	870.0	8%
Units	11,695	2,419	21%

1) Values are reflected at the system level.

[1] The information reflects results for the Non-Residential Smart $aver Prescriptive program in aggregate. Reference the Appendix for results by technology.

Non-Residential Smart $aver Prescriptive

Non Residential Smart Saver Energy Efficient HVAC Products[1]

$ in millions, rounded	Vintage 2019 As Filed	Vintage 2019 YTD December 31, 2019	% of Target
NPV of Avoided Cost	$11.7	$4.5	38%
Program Cost	$5.8	$2.2	38%
MW	5.0	1.4	27%
MWH	13,318.7	5,951.0	45%
Units	231,113	3,038,732	1315%

1) Values are reflected at the system level.

Non Residential Smart Saver Energy Efficient Lighting Products[1]

$ in millions, rounded	Vintage 2019 As Filed	Vintage 2019 YTD December 31, 2019	% of Target
NPV of Avoided Cost	$62.0	$98.0	158%
Program Cost	$17.8	$20.8	117%
MW	16.3	28.3	173%
MWH	122,943.3	149,658.4	122%
Units	14,523,270	5,456,789	38%

1) Values are reflected at the system level.

Non Residential Energy Efficient Pumps and Drives Products[1]

$ in millions, rounded	Vintage 2019 As Filed	Vintage 2019 YTD December 31, 2019	% of Target
NPV of Avoided Cost	$3.0	$0.5	17%
Program Cost	$1.2	$0.2	16%
MW	1.0	0.2	17%
MWH	6,310.6	1,043.9	17%
Units	8,662	1,131	13%

1) Values are reflected at the system level.

Non Residential Energy Efficient ITEE[1]

$ in millions, rounded	Vintage 2019 As Filed	Vintage 2019 YTD December 31, 2019	% of Target
NPV of Avoided Cost	$1.8	$0.0	0%
Program Cost	$0.7	$0.0	6%
MW	0.1	0.0	0%
MWH	6,503.2	8.4	0%
Units	5,382	134	2%

1) Values are reflected at the system level.

Non-Residential Smart $aver Prescriptive

Non Residential Energy Efficient Process Equipment Products[1]

$ in millions, rounded	Vintage 2019 As Filed	Vintage 2019 YTD December 31, 2019	% of Target
NPV of Avoided Cost	**$0.5**	**$0.3**	**61%**
Program Cost	**$0.2**	**$0.1**	**50%**
MW	**0.1**	**0.1**	**65%**
MWH	**1,052.9**	**540.5**	**51%**
Units	**4,669**	**11,232**	**241%**

1) Values are reflected at the system level.

D. Qualitative Analysis

Highlights

The Program has developed multiple approaches, including paper and online options for incentive payment applications and instant incentives through the midstream marketing channel and the Online Energy Savings Store, for reaching a broad, diverse audience of business customers.
Several 2019 program trends are listed below.

- Customers continue to show high interest in energy efficiency and had significant funds to invest in efficiency when rebates offset a portion of the cost. The program activity in 2019 came in at 98% of target.
- More customers were drawn to the easy-to-use midstream marketing channel, which contributed nearly half of the 2019 impacts.
- More applicants used the online application.
- Outreach continued to support Trade Allies working with the program.
- Targeted marketing reached out to customers and Trade Allies.
- A dedicated team of representatives responded to customer questions via phone and email provided high levels of customer service.
- Large Account Management and Business Energy Advisors continue to leverage personal relationships with large and medium businesses to identify and support new EE projects.

Customers have several options for participating in the Program. The following chart summarizes 2019 participating customers by Program channel:

Program Option	Participating Customers*	% 2018 YTD Repeat Customer
Paper and Online Application Form	1,169	61%
Midstream Marketing Channel	2,302	61%
Online Energy Savings Store	1,414	63%
Multifamily Free Channel	56	79%

*May include multiple facilities/sites for one customer.

PAPER AND ONLINE APPLICATIONS
During 2019, the Company paid incentives for 2,414 applications, consisting of 5,388 measures. During 2019, 69% of applications were submitted via the online application portal, compared to 61% in 2018. The average payment per paid application was $4,202.

Customers continue to take advantage of an optional process introduced in 2018 to pre-verify equipment eligibility to have certainty that their selected equipment qualifies for an incentive prior to purchase, which is designed to overcome another barrier that can delay investment in EE projects.
Many Trade Allies participating in the application process reduce the customer's invoice by the amount of the Smart $aver® Prescriptive incentive and then receive reimbursement from Duke Energy. Customers

Non-Residential Smart $aver Prescriptive

often prefer this method rather than paying the full equipment cost upfront and receiving an incentive check from Duke Energy.

Duke Energy utilizes an internal database that allows the Program to self-administer Program applications and track program data.

MIDSTREAM MARKETING CHANNEL

The midstream marketing channel provides instant incentives to eligible customers at a participating distributor's point of purchase. Approved midstream distributors validate eligible customers and selected lighting, HVAC, food service and IT products through an online portal and use that information to show customers the reduced price for high efficiency equipment. Upon purchase, the distributor reduces the customer's invoice for the eligible equipment by the amount of the Smart $aver® Prescriptive incentive. Distributors then provide the sales information to Duke Energy electronically for reimbursement. The incentives offered through the midstream channel are consistent with current program incentive levels.

Energy Solutions provides the online portal for distributors to manage the paperless validation and incentive application. During 2019, approximately 44% of total Smart $aver Prescriptive incentives were paid through the midstream marketing channel. Duke Energy currently has 272 distributors signed up for the midstream channel, an increase of 14% from 2018.

ONLINE ENERGY SAVINGS STORE

Duke Energy also offers the Business Savings Store on the Duke Energy website, with orders fulfilled by the third-party EFI. The site provides customers the opportunity to take advantage of a limited number of incentivized measures by purchasing qualified products from an online store and receiving an instant incentive in the form of a reduced purchase price. The incentives offered in the online store are consistent with current program incentive levels. Through an emphasis on focused marketing and increased customer interest, the Business Savings Store experienced significant growth in participation in 2019, nearly doubling the number or participating customers versus 2018.

MULTIFAMILY COMMON AREA FREE MEASURES

In order to grow the number of accounts participating in EE, particularly in market segments where knowledge of EE is limited, the Program is now collaborating with the Residential Multifamily Direct Install program to offer free low-cost measures to multifamily common areas as well as tenant spaces. Multifamily properties that are being approached by the Residential Multifamily program's vendor, Franklin Energy, are now eligible to add on limited quantities of common area measures. The common area must be on an eligible commercial rate to participate. Measures such as LED screw-in lamps, LED exit signs, low flow shower heads, faucet aerators and pipe insulation are now being installed where possible in multifamily common areas as well as in residential spaces. For those properties that accept the measures, Franklin Energy will directly install them in the common areas when they are on site for the residential installations. Franklin Energy tracks the measures installed by property, as well as total installations and reports this information to the Smart $aver program team. This channel began earlier this year, additional channels may be developed in the future to distribute free measures.

TRADE ALLY MANAGEMENT

Over the years, the Program has worked closely with Trade Allies to promote the program to our business customers at the critical point in time when customers are considering standard or high efficiency equipment options. The Smart $aver® outreach team builds and maintains relationships with Trade Allies in and around Duke Energy's service territory. Existing relationships continue to be cultivated while recruitment of new Trade Allies also remains a focus. Duke Energy's efforts to engage Trade Allies include the following activities:

- Trade Ally Search tool located on the Smart $aver® website
- Inspections of a sample of all projects to ensure quality control
- Trade Ally co-marketing including information about the Smart $aver program in the TA's marketing efforts
- Online application portal training and support

- Midstream channel support
- Trade Ally year-end awards
- Trade Ally quarterly newsletter
- Technology- and segment-specific marketing collateral
- Trade Ally discussion group (20 Trade Allies that give input on programs)
- Trade Ally training
- Sponsorship of trade ally events
- Online collateral toolkit for access to marketing materials

The Trade Ally outreach team educates Trade Allies on the program rules and the Smart $aver Program expectations for Trade Ally conduct. The Company continues to look for ways to engage the Trade Allies in promotion of the Program and to target Trade Allies based on market opportunities.

Issues

In the last few years, the combination of the Program's incentives and the falling prices for LED equipment has been very attractive for customers and many have taken advantage of the opportunity to invest in LED upgrades. While there is still significant opportunity for high efficiency lighting, the excitement around LEDs has taken customers' attention away from EE opportunities outside of lighting. The Program has continued to promote non-lighting EE and encourage customers to go beyond lighting for efficiency projects. The Company continues to work with outside consultants and internal resources to develop strategies to understand equipment supply/value chains and increase awareness of these measures going forward.

Potential Changes

Standards continue to change and new, more efficient technologies continue to emerge in the market. Duke Energy periodically reviews major changes to baselines, standards, and the market for equipment that qualifies for existing measures and explores opportunities to add measures to the approved Program for a broader suite of options. This work is underway now, and there are expected to be changes announced for a limited number of new measures and measure updates later in 2020. These changes likely fall under the flexibility guidelines and not require regulatory approvals. When existing measures change, such as when a measure is removed or an incentive amount is reduced, customers have a 90-day grace period to apply for the past measure or incentive amount.

Duke Energy is also considering new and innovative ways to reach out to customer segments that have had a lower rate of prescriptive incentive applications and considering options to partner with other Duke Energy EE programs to cover gaps in the market and ultimately, make it easier for customers to participate in Smart $aver incentives.

The Duke program team would like to drive deeper customer savings and increase participation in technologies beyond lighting. The Midstream distributor channel has proven to be efficient and customer friendly, influencing energy efficiency at the point of sale. Efforts are underway to build upon the success of the Midstream channel by evaluating a similar Upstream offer with manufacturers for existing food service and HVAC technologies only.

E. Marketing Strategy

Nonresidential customers learn of programs via targeted marketing material and communications. The 2019 marketing plan included direct marketing such as email and direct mail, online marketing, print marketing and supporting partnerships. The marketing team has selected a highlighted topic for each month and promotes coordinated communication around that topic.

The internal marketing channel consists of assigned Large Business Account Managers, small and medium Business Energy Advisors, and Local Government and Community Relations, who all identify potential opportunities as well as distribute program informational material to customers and Trade Allies.

Non-Residential Smart $aver Prescriptive

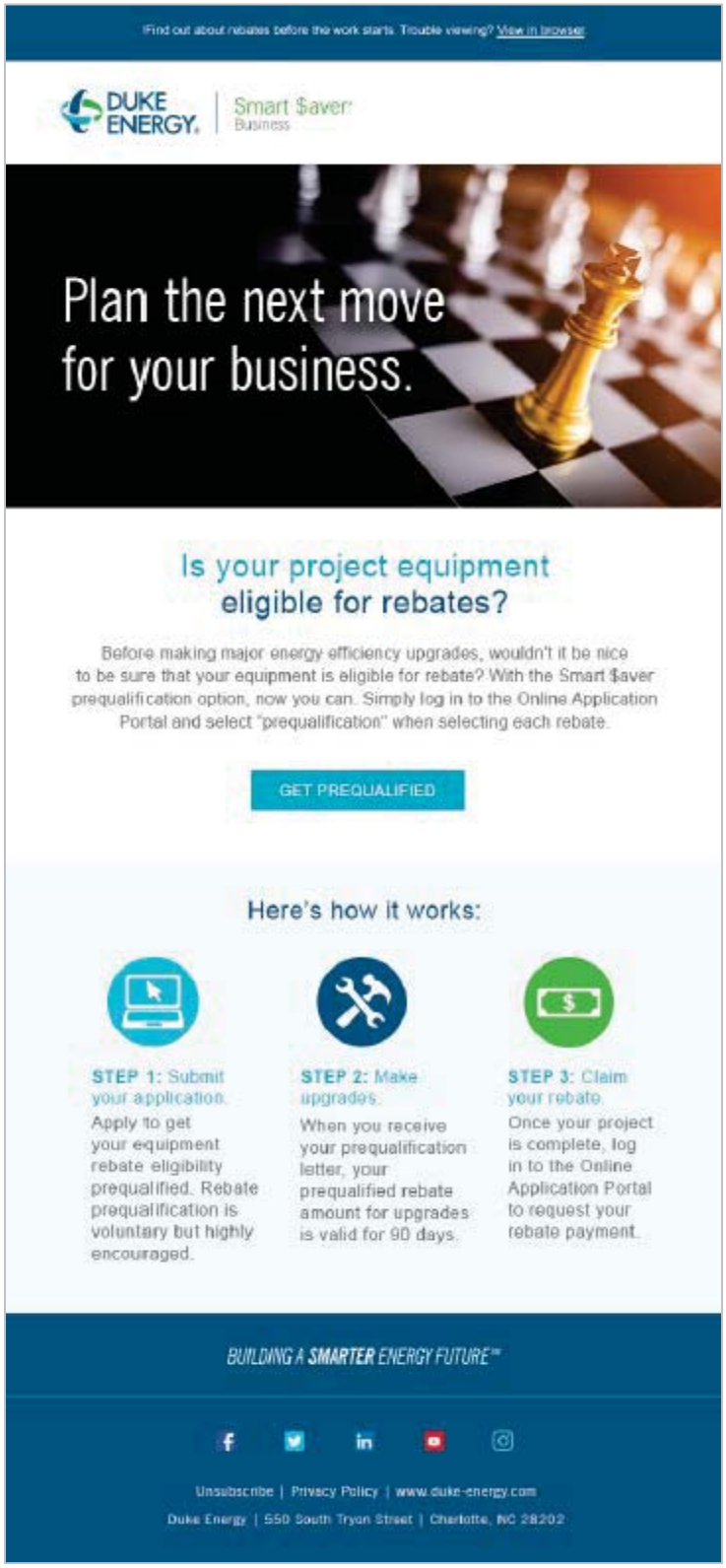
Duke Energy has Business Energy Advisors in the Carolinas area to perform outreach to unassigned small and medium business customers. The Business Energy Advisors follow up on customer leads, assist with program questions, and steer customers who are not already working with a trade ally to the trade ally search tool. In addition, the Business Energy Advisors contact customers with revenue between $60,000 and $250,000 to promote the Smart $aver® programs. The Economic and Business Development groups also provide a channel to customers who are new to the service territory.

The following chart summarizes the campaigns during 2019. Select example images are found on the following pages.

Month	Channel	Audience	Incentives Highlighted
January	Email	All Business Customers	Pre-Qualification (All Measures Categories)
February	Email	SMB, BEA (DEC NC/SC)	Non-Participating Customers (All Measures Categories)
February	Email	SMB, BEA (DEC/DEP)	Past Participants (HVAC, Commercial Equipment, Industrial Equipment, Agriculture)
May	Email	All Business Customers*	New Rebate Measures (All Measures Categories)
May	Paid Advertising (digital, paid social, video)	All Business Customers	All Measures Categories
June	Paid Advertising (digital, paid social, video)	All Business Customers	All Measures Categories
July	Paid Advertising (digital, paid social, video)	All Business Customers	All Measures Categories
July	Email	All Business Customers	Lighting & Lighting Controls
July	Email	All Business Customers	Wastewater
August	Paid Advertising (digital, paid social, video)	All Business Customers	All Measures Categories
August	Email	All Business Customers	Lighting
September	Paid Advertising (digital, paid social, video)	All Business Customers	All Measures Categories
October	Email	All Business Customers	HVAC
October	Email	All Business Customers	All Measure Categories/ Cross-Sell Savings Store
November	Paid Advertising (digital, paid social)	All Business Customers (DEC NC/SC)	All Measures Categories
December	Paid Advertising (digital, paid social)	All Business Customers (DEC NC/SC)	All Measures Categories

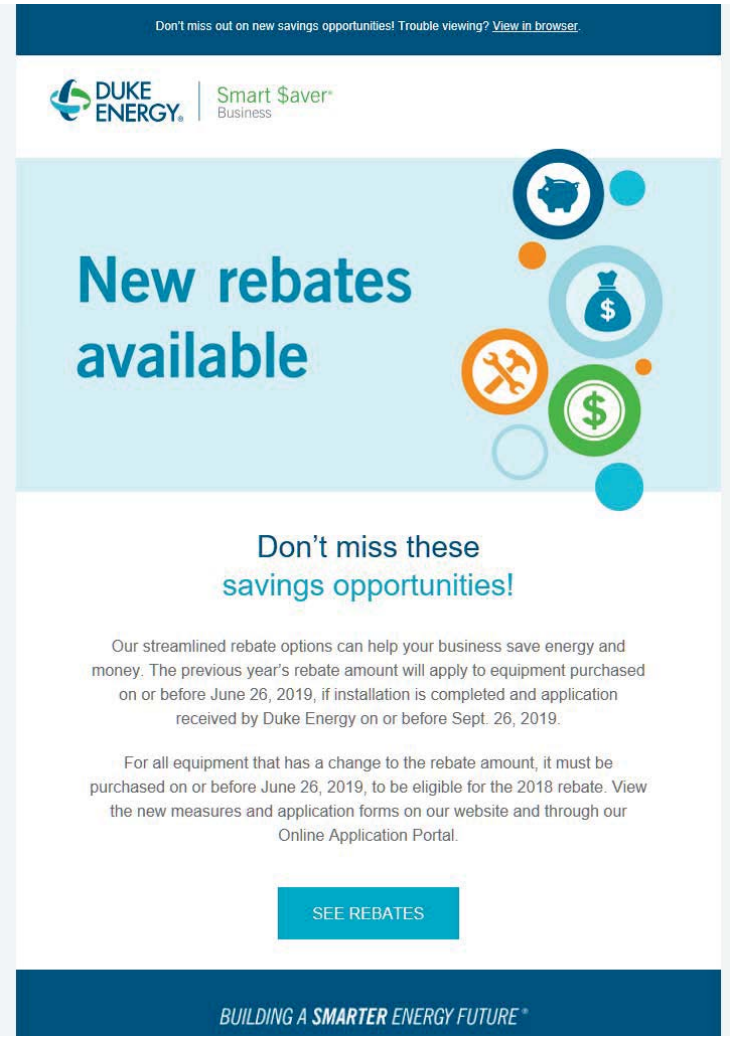
Non-Residential Smart $aver Prescriptive

January Pre-Qualification – Email



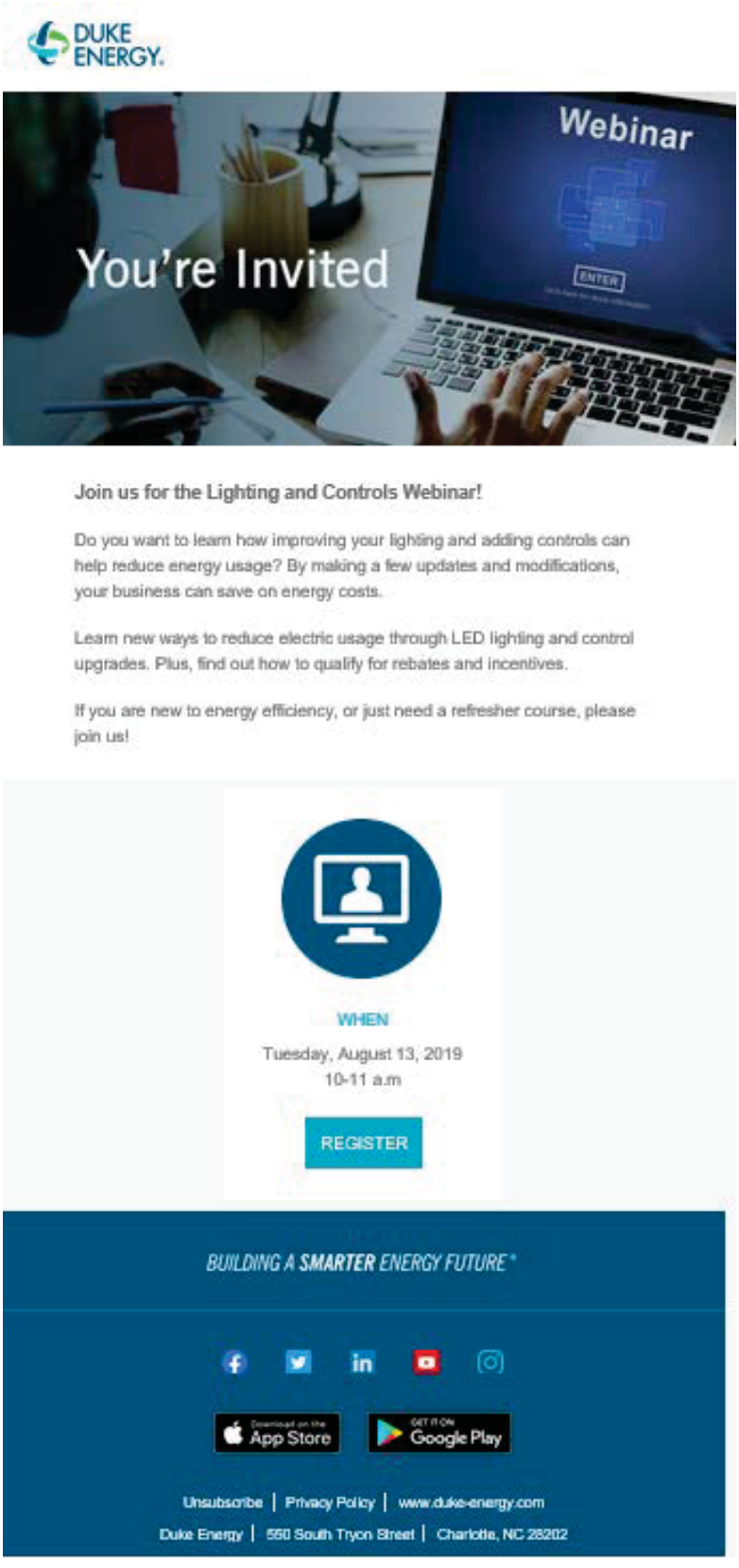
Non-Residential Smart $aver Prescriptive

May New Rebate Measures – Email



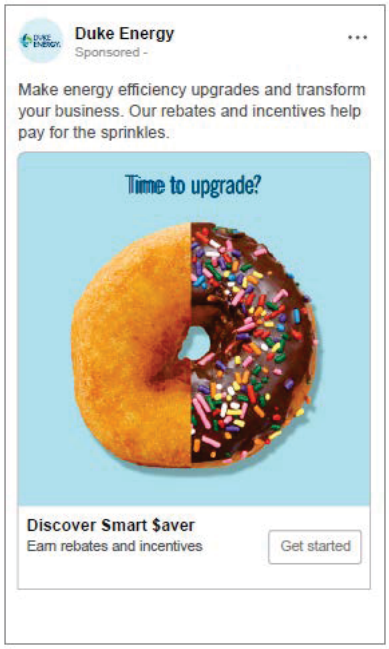
Non-Residential Smart $aver Prescriptive

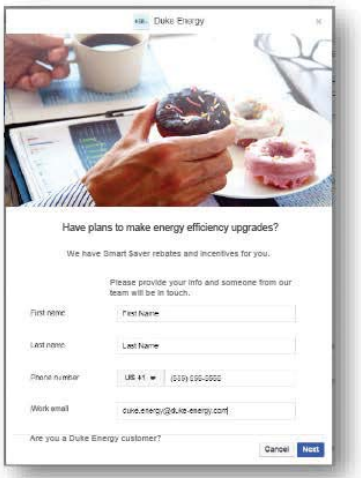
July Lighting & Controls Webinar – Email

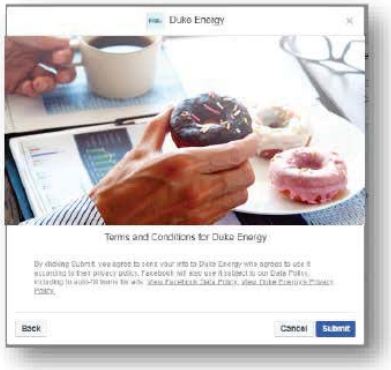


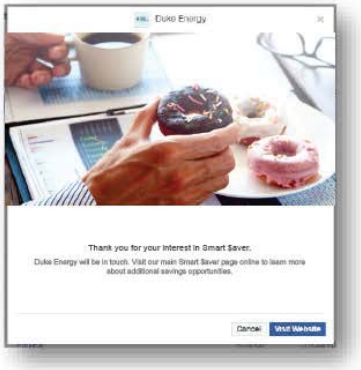
Non-Residential Smart $aver Prescriptive

December Paid Social – Facebook









Non-Residential Smart $aver Prescriptive

F. Evaluation, Measurement and Verification

The combined DEC/DEP process and impact evaluation for the Non-Residential Smart $aver® Prescriptive Incentive program for the period of March 2017 through December 2018 began the first quarter of 2019.

A process evaluation to determine free ridership and spillover will be conducted. The process evaluation will include interviews with program management. Main Channel Customer, Midstream Customer and Trade Ally surveys will be conducted to assess program awareness, satisfaction and installation decisions. Program materials will also be reviewed to fully understand the specifics of the program design.

The impact evaluation will mostly consist of engineering desk reviews as well as on site metering for a subset of lighting measures. An online survey with Midstream lighting customers will be performed to verify purchase and installation of lighting measures. Program supplied tracking databases, project documentation and Technical Reference Manuals from Ohio and neighboring states will also be used to estimate verified energy and demand savings for the Smart $aver Prescriptive program.

The final report is scheduled for the first quarter of 2020.

Non-Residential Smart $aver® Custom

A. Description

Duke Energy Carolinas, LLC's (the "Company's") Non-Residential Smart $aver® Custom Incentives (the "Program") offers financial assistance to qualifying commercial, industrial and institutional customers (that have not opted-out) to enhance their ability to install cost-effective electrical energy efficiency projects.

The Program is designed to meet the needs of the Company's customers with electrical energy saving projects involving more complicated or alternative technologies, or with measures not covered by the Non-Residential Smart $aver Prescriptive Program. The intent of the Program is to encourage energy efficiency projects that would not otherwise be completed without the Company's technical or financial assistance.

Unlike the Non-Residential Smart $aver Prescriptive Program, the Program requires pre-approval prior to the project initiation. Proposed energy efficiency measures may be eligible for customer incentives if they clearly reduce electrical consumption and/or demand.

The two approaches for applying for incentives for this Program are Classic Custom and Smart $aver Tools. Each approach has a method by which energy savings are calculated, but the documents required as part of the application process vary slightly between the two.

Currently the application forms listed below are located on the Company's website under the Smart $aver® Incentives (Business and Large Business tabs).

- Custom Application, offered in word and pdf format.
- Energy savings calculation support:
    - Classic Custom excel spreadsheet approach (> 700,000 kWh or no applicable Smart $aver Tool)
        - Lighting worksheet (excel)
        - Variable Speed Drive (VFD) worksheet (excel)
        - Compressed Air worksheet (excel)
        - Energy Management System (EMS) worksheet (excel)
        - General worksheet (excel), to be used for projects not addressed by or not easily submitted using one of the other worksheets
    - Smart $aver Tools approach (< 700,000 kWh)
        - HVAC & Energy Management Systems
        - Lighting (no project size limit)
        - Process VFDs
        - Compressed Air

The Company contracts with AESC to perform technical review of applications. All other program implementation and analysis is performed by Duke Energy employees or direct contractors.

Audience

All of the Company's non-residential electric accounts billed on eligible rate schedules, except those that choose to opt-out of the Program, are eligible.

Non-Residential Smart $aver® Custom

B & C. Impacts, Participants and Expenses

Non Residential Smart Saver Custom[1]

$ in millions, rounded	Vintage 2019 As Filed	Vintage 2019 YTD December 31, 2019	% of Target
NPV of Avoided Cost	$24.1	$35.9	149%
Program Cost	$10.1	$8.9	88%
MW	6.9	10.1	146%
MWH	60,678.5	52,522.6	87%
Units	48,280	34,709	72%

1) Values are reflected at the system level.

D. Qualitative Analysis

Highlights

Customers continue to identify energy efficiency opportunities eligible for incentives under this Program. In 2019, 203 new pre-approval applications were submitted. 103 from NC, 24 from SC and 76 new construction applications not yet defined by jurisdiction without a final account number.

Smart $aver Custom Incentives program uses a flat rate incentive for both energy and demand savings.

Efforts to educate trade allies and vendors who sell energy efficient equipment have been very successful. In many cases, vendors will submit the paperwork for the customer, eliminating a barrier for customers that do not have the resources to devote to completing the application.

The Program launched a fast track option for 2017 which gives customers the ability to pay a fee to speed up their application processing time to seven business days. This fee is passed through to the vendor for its cost to expedite the application.

As of the end of 2019, Custom-to-Go was retired and replaced with the Smart $aver Tool. For the lighting tool only, the customer can submit one file for both Prescriptive and Custom reducing some of the customer's administrative burden. To date DEC has received 22 combined lighting applications.

Issues

The Program application process is considered burdensome by some customers due to the individual and technically intensive review required for all projects applying for a custom incentive. Each year, Program staff explores ways to reduce the length of the application. By streamlining processes, the average processing time has dipped to 19 days for all states/jurisdictions.

The technical review often requires customers (or their vendors) to quantify the projected energy savings from the proposed project. This process can be lengthy and may require some level of engineering expertise. Where necessary, this requirement will continue, thus ensuring that incentives are being paid for cost-effective verifiable efficiency gains. Indications are that the Smart $aver Tools and online application portal have relieved some of this burden.

The custom program is subject to large fluctuations in performance due to the importance of a small number of large projects. Although the number of small projects is significant compared to the number of large projects, the large projects drive the majority of annual impacts.

The custom program is still limited by customers who are opted out of the EE Rider. Those customers who are opted out are not eligible to participate and any projects completed by those customers are lost opportunities. The custom program is actively working with internal resources (large account managers

and Business Energy Advisors) to determine if opting in to the EE Rider for a potential project is the best option for customers currently opted out.

Finally, the custom program continues to see changes in available technologies as specific measures become eligible for Smart $aver Prescriptive.

Potential Changes

The Custom program continues to evaluate additional improvements to enhance participation, processing speed and program efficiency.

E. Marketing Strategy

The Company will continue the Program marketing efforts in 2020 through various marketing channels that include but are not limited to the following:

- Direct mail (letters and postcards to qualifying customers)
- Duke Energy website
- Community outreach events
- Small Business Group outreach events
- Paid advertising/mass media
- Social media promotions
- Trade ally outreach
- Account managers
- Business Energy Advisors

These marketing efforts are designed to create customer awareness of the Program, to educate customers on energy saving opportunities, and to emphasize the convenience of Program participation.

Non-residential customers learn of programs via targeted marketing material and communications. Information about incentives is also distributed to trade allies who sell equipment and services to all sizes of nonresidential customers. Large business or assigned accounts are targeted primarily through Company account managers. Unassigned small to medium business customers are supported by the Company's Business Energy Advisors. The Business Energy Advisors follow up on customer leads, assist with program questions, and steer customers who are not already working with a trade ally to the trade ally search tool. In addition, the Business Energy Advisors promote the program to customers with electrical costs between $60,000 and $250,000.

The internal marketing channel consists of Large Business Account Managers and Local Government and Community Relations who all identify potential opportunities as well as distribute program informational material to customers and trade allies. In addition, the Economic and Business Development groups also provide a channel to customers who are new to the service territory.

The Program launched a new marketing channel in 2017 called New Construction Energy Efficiency Design Assistance (NCEEDA) to identify energy efficiency projects for customers currently underserved in the SMB market. This channel will utilize the vendor Willdan Energy Solutions to help identify those opportunities, complete savings calculations, and submit applications for the customer. As of January 24, 2020, DEC has 233 active and completed enrolled projects in the NCEEDA offering, representing 32.3 million square feet of area. Of these, the 187 Smart $aver Custom project applications represent 64.8 million kWh of energy savings.

Non-Residential Smart $aver® Custom

F. Evaluation, Measurement and Verification

No evaluation activities occurred in 2019, however evaluation activities will commence in the first quarter of 2020. A final report, combined with DEP, is tentatively planned for the second quarter of 2021.

Non-Residential Smart $aver® Custom Assessment

A. Description

Duke Energy Carolinas, LLC's (the "Company's") Non-Residential Smart $aver® Custom Assessment (the "Program") offers financial assistance to qualifying commercial, industrial, and institutional customers to help fund an energy assessment and retro-commissioning design assistance in order to identify energy efficiency conservation measures of existing or new buildings or systems. The detailed study and subsequent list of suggested energy efficiency measures help customers to utilize the Non-Residential Smart $aver® Custom. The Program delivers a detailed energy report that includes the technical data needed for the Non-Residential Smart $aver® Custom Program and assistance with the Non-Residential Smart $aver® Application. All kWh and kW savings identified from measures implemented as a result of the pre-qualified assessments are attributed to Smart $aver Custom Program.

The intent of the Program is to encourage energy efficiency projects that would not otherwise be completed without the Company's technical and financial assistance. The Program's application requires pre-qualification for eligibility. Assessments are performed by professional engineering firms pre-selected and contracted by the Company. The current engineering firms are Willdan, APTIM and ThermalTech Engineering, Inc. All firms offer a diversified set of skills that support all qualifying commercial, industrial, and institutional customers.

The program was modified in 2017 to allows customers to choose one of the firms the Company contracted or to seek third party engineering assistance of their own selection and receive the same financial assistance. Pre-established criteria ensuring that the Program maintains high standards for engineering and work quality must be met for the funds to be released. This modification, which provided customers with more flexibility and choices, is expected to drive an increase in participation.

In 2019, the program again modified its approach again by utilizing a "virtual" approach to the assessment. Using energy modeling software called NEO from Willdan and collecting all building information remotely will allow the audit to be completed in 2-3 weeks for less cost. Each audit will have a fixed cost of $5,000 of which the customer will be responsible for 50%. The virtual audit will not be applicable to buildings with process loads such as manufacturers. Audits of buildings with process loads will continue to be performed by Aptim and Thermaltech or the customer's vendor of choice. With the new methodology, the goal is to perform 30-50 assessments on an annual basis.

Audience

Pre-qualified non-residential electric customers, except those that choose to opt out of the Program, are eligible.

B & C. Impacts, Participants and Expenses

Non Residential Smart Saver Custom Technical Assessments[1]

$ in millions, rounded	Vintage 2019 As Filed	Vintage 2019 YTD December 31, 2019	% of Target
NPV of Avoided Cost	$3.5	$0.7	20%
Program Cost	$1.6	$0.3	18%
MW	1.0	0.1	15%
MWH	8,831.6	1,930.8	22%
Units	6,125	4	0%

1) Values are reflected at the system level.

D. Qualitative Analysis

Highlights

Non-Residential Smart $aver® Custom Assessment

Participation in 2019 included 37 customers completing an application for an energy assessment. Of these, 20 chose to switch to the Small Business Energy Saver Program because that program fit the customer's needs better. Nine assessments were completed.

E. Marketing Strategy

The marketing strategy for the Program is to work with those customers that need technical and financial assistance as a companion to their internal resources. Given the facility-wide approach, many of the energy savings opportunities are complex and interactive in nature which fits well with the end-to-end involvement utilized in the Program. Typical customer marketing activity involves direct marketing from Business Account Managers, electronic postcards, e-mails, and information attained through the Company's website and direct customer inquiries. Marketing in the future may shift as the virtual modeling software becomes more applicable. The opportunity to receive a quick readout of a building's efficiency level for a nominal cost will be a compelling message to Duke Energy customers.

F. Evaluation Measurement and Verification

No evaluation activities occurred in 2019.

Non-Residential Smart $aver® Performance Incentive

A. Description

Duke Energy Carolinas, LLC's (the "Company's") Non-Residential Smart $aver® Performance Incentives (the "Program") offers financial assistance to qualifying commercial, industrial and institutional customers (that have not opted-out) to enhance their ability to install cost-effective electrical energy efficiency projects.

The Program is designed to encourage the installation of high efficiency equipment in new and existing nonresidential establishments as well as the performance of efficiency-related repair activities designed to maintain or enhance efficiency levels in currently installed equipment. The Program provides incentive payments to offset a portion of the higher cost of energy efficient installations that are not eligible under either the Smart $aver® Prescriptive or Custom programs. The types of measures covered by the Program include projects with some combination of unknown building conditions or system constraints or uncertain operating, occupancy, or production schedules. The specific type of measures are agreed upon with the Customer. The Program is delivered in close coordination with the existing Custom program team and shares resources for administrative review and payment processing. The Program requires pre-approval prior to project initiation.

The intent of the Program is to broaden participation in the Company's non-residential efficiency programs by providing incentives for projects that previously were deemed too unreliable to calculate an acceptably accurate savings amount predictively and, therefore, were not offered incentives. The program is also expected to provide a platform for gaining a better understanding of new technologies.

The key difference between the Performance Incentive Program and the Custom Program is that the customers in the Performance Incentive Program are paid incentives based on actual measured performance. For each project, a plan is developed to verify the actual performance of the project once completed and is the basis for the performance portion of the incentive.

The Program incentives will typically be paid out in the following manner, though payment installment quantities and timing may vary:

- Incentive #1: For the portion of savings that are expected to be achieved with a high degree of confidence, an initial incentive will be paid. This incentive is paid once installation is complete.
- Incentive #2: After performance is measured and verified, the performance-based part of the incentive will be paid out as follows:
    - If performance exceeds expectations, the incentive payout may be larger.
    - If performance does not meet expectations, the incentive payout may be smaller.

Application forms for applying for incentives are located on the Company's website.

The Company contracts with Alternative Energy Systems Consulting, Inc. (AESC) to perform technical review of applications. All other program implementation is performed by Duke Energy employees or direct contractors.

Audience

All of the Company's non-residential electric accounts billed on eligible rate schedules, except those that choose to opt-out of the Program, are eligible.

Non-Residential Smart $aver® Performance Incentive

B & C. Impacts, Participants and Expenses

Non Residential Smart Saver Performance Incentive[1]

$ in millions, rounded	Vintage 2019 As Filed	Vintage 2019 YTD December 31, 2019	% of Target
NPV of Avoided Cost	$8.5	$2.2	26%
Program Cost	$3.2	$0.8	25%
MW	2.5	0.4	16%
MWH	21,489.5	4,546.0	21%
Units	23,254,911	19	0%

1) Values are reflected at the system level.

D. Qualitative Analysis

Highlights

As new technologies are introduced and changes occur in the energy efficiency marketplace, performance incentives are the perfect tool to influence and reward customers who invest in energy efficiency. The Smart $aver Performance Incentives program was launched on January 1, 2017. Efforts to encourage internal resources, trade allies and vendors who sell energy efficient equipment to promote the Program and assist customers to participate are continuous and on-going. In addition, the Program is marketed closely with the Smart $aver Custom Program.

In DEC, the program is beginning to reap the fruits of its marketing efforts as program participation increases slightly. In 2019 the program received 12 new applications, 2 of those were from SC.

The program experiences large fluctuations in performance due to long project lead times, long monitoring and verification times, and the timing and sizes of projects. With a compelling value proposition and internal resources and trade allies getting comfortable with this unique program offering, participation is expected to continue to be strong.

The program is now able to offer both top and bottom cycle CHP to customers.

Issues

Program management is monitoring a few areas.

- The preferred method for measurement and verification of performance is gathering, monitoring and analyzing customer billing history. However, energy savings are not significant enough at times to evaluate effectively through the review of billing information. If this is the case, sub-metering is required at the customer's expense and may be a hurdle due to the time and expense of monitoring and verifying savings.

- The Performance program cannot be offered to customers who are opted out of the EE Rider. Performance projects can easily carryover into multiple calendar years because of the monitoring and verification requirement, a situation which could make opting in more difficult to justify.

- Sometimes project M&V can span multiple years thus requiring a customer to be opted-in for multiple years. This is often not preferred and we are beginning to see customers forfeit a portion of their project incentive to opt-out of the rider.

Non-Residential Smart $aver® Performance Incentive

- Customers may not participate because of the risk of measured energy savings being less than expected and resulting in a smaller incentive payout.

- The program is having difficulty in finding cost effective projects. Typical Performance project with uncertainty in savings have been controls related, where savings are determined based on the part-load characteristics of the measure or system optimization. These types of projects typically have the following characteristics which makes costs-effectiveness challenging:
  - High first costs
  - Little demand savings – low avoided costs
  - Low measure life

  The program will continue to evaluate projects on a case by case basis to ensure cost effective projects are incentivized.

Potential Changes

The Company continuously considers functional improvements to enhance participation, processing speed and program efficiency.

E. Marketing Strategy

The 2020 marketing strategy for the Smart $aver Performance Incentive Program closely aligns with the Custom Program. The goal is to educate the Company's non-residential customers about the technologies incentivized through both programs, as well as the benefits of installing energy-efficient equipment. These efforts encompass a multi-channel approach including but not limited to the following:

- Email (targeted customers)
- Direct Mail (letters to qualified/targeted customers)
- Duke Energy Carolinas website
- Community outreach events
- Print advertising/mass media
- Target customer outreach
- Industry Associations
- Large Account Managers
- Business Energy Advisors
- Trade Ally Outreach

Marketing efforts are designed to create customer awareness of the Program, to educate customers on opportunities to save energy, and to emphasize the convenience of Program participation.

Non-residential customers learn of programs via targeted marketing material and communications. Information about incentives is also distributed to trade allies who sell equipment and services to all sizes of nonresidential customers. Large business or assigned accounts are targeted primarily through Company account managers. Unassigned small to medium business customers are supported by the Company's Business Energy Advisors. The Business Energy Advisors follow up on customer leads, assist with program questions, and steer customers who are not already working with a trade ally to the trade ally search tool. In addition, the Business Energy Advisors contact customers with electrical costs between $60,000 and $250,000 to promote the program.

The internal marketing channel consists of Large Business Account Managers, Business Energy Advisors, and Local Government and Community Relations who all identify potential opportunities as well as distribute program informational material to customers and trade allies. In addition, the Economic and Business Development groups also provide a channel to customers who are new to the service territory.

Non-Residential Smart $aver® Performance Incentive

F. Evaluation, Measurement and Verification

No evaluation activities occurred in 2019. Future evaluation timing will depend upon sufficient participation.

A. Description

PowerShare® ("Program") is a demand response program offered to commercial and industrial customers. The Program is comprised of Mandatory ("PS-M"), Generator ("PS-G"), and Voluntary ("PS-V") options, and customers can choose from a variety of offers. Under PS-M and PS-G, customers receive capacity credits for their willingness to shed load during times of peak system usage. Energy credits are also available for participation (shedding load) during curtailment events. The notice to curtail under these offers can be rather short (15-30 minutes), although every effort is made to provide as much advance notification as possible. Failure to comply during an event could result in penalties.

Audience

The Program is offered to Duke Energy Carolinas, LLC's (the "Company's") non-residential customers who have not opted-out and are able to meet the load shedding requirements.

B & C. Impacts, Participants and Expenses

PowerShare[1]

$ in millions, rounded	Vintage 2019 As Filed	Vintage 2019 YTD December 31, 2019	% of Target
NPV of Avoided Cost	$38.5	$42.1	109%
Program Cost	$13.3	$13.0	98%
MW[2]	337.9	342.6	101%
MWH	0.0	N/A	-
Units[3]	318,083	322,533	101%

Notes on Tables:

1) Values are reflected at the system level.

2) MW capability derived by taking average over specific PowerShare contract periods. At month-end December 2019, we had the ability to shed 342.6 MW (at the plant), representing 101% of the as filed capacity.

3) Units included in filing represented KW at meter, rather than number of participants.

D. Qualitative Analysis

Highlights

PS-M and PS-G continue to be well received by customers who have the flexibility to curtail load upon request in both North Carolina and South Carolina. Although several new participants joined the PowerShare program in 2019 adding more than 24MW of capacity, the gains were partially offset by the loss of existing participants, including the closure of a few major textile facilities. There were no PowerShare curtailment events in 2019.

Issues

No current issues.

Potential Changes

No changes anticipated at this time.

E. Marketing Strategy

To date, marketing efforts for the Program have focused on the relationship between the Company's account executives and their assigned customers. As part of their normal contact with customers, the account executives introduce the Program, including any new options/offers, while explaining the value proposition to the customer. Account executives share in-house analytics that show the incentives for

each offer as applied to the customer's specific load profile and provide marketing collateral to explain the details of all the Program offers.

F. Evaluation, Measurement and Verification

The results of the 2018 PowerShare impact and process evaluation were shared with the Carolinas Collaborative in the Second Quarter of 2019. For the impact evaluation, Navigant audited the hourly kW DR event load shed for participating customers by replicating the Schneider Electric Energy Profiler Online™ (EPO) methods used to calculate the energy (kWh) and demand (kW) impacts used to determine settlement payments.

The process evaluation determined there was high satisfaction with the program. Participants preferred however, to get more advance notice for when to curtail and to gain a better understanding of how the incentive was calculated.

A. Description

Duke Energy Carolinas, LLC's (the "Company's" or "DEC") EnergyWise Business (the "Program") is an energy efficiency and demand response program for non-residential customers that allows the Company to reduce the operation of participants' air conditioning units to help manage the power grid. The Program provides customers with options for how they would like to participate. In exchange for participation, the Company applies an annual incentive directly to their bills.

For each air conditioning or heat pump unit that they have, Program participants can choose between a Wi-Fi thermostat or a load control switch professionally installed for free by the Program. In addition to choosing the equipment, participants also choose the cycling level at which they participate—30%, 50% or 75%. The levels represent the percentage of the normal on/off cycle of the unit that is reduced. During a conservation period, Company sends a signal to the thermostat or switch to reduce the amount of time a unit is on by the percentage the participant selected. For participating at the 30% level the customer receives a $50 annual bill credit for each unit, $85 for 50% cycling, and $135 for 75% cycling. Finally, participants that have a heat pump unit with electric resistance emergency/back up heat and choose the thermostat can also participate in a winter option that allows the Company to control the emergency/back up heat. For 100% control of the emergency/back up heat, the Company provides an additional $25 annual bill credit.

Participants choosing the thermostat are given access to a portal that allows them to control their units from anywhere they have internet access. They can set schedules, adjust the temperature set points and receive energy conservation tips and communications from the Company. In addition to the portal access, participants also receive conservation period notifications. Notifications allow participants to make adjustments to their schedules or notify their employees of the upcoming conservation period. Participants are allowed to override two conservation periods per year either before or during the conservation period.

Audience

The Program is available to existing non-residential customers that are not opted-out of the DSM portion of the Company's EE/DSM rider, Rider DSM; have at least one air conditioner or heat pump that operates to maintain a conditioned space on weekdays during the calendar months of May through September; and are not served under Schedules BC and HP, Riders NM, SCG, IS, PS or PSC. Also, customers must have an average minimum usage of 1,000 kWh during those same calendar months.

B & C. Impacts, Participants and Expenses

EnergyWise for Business[1]

$ in millions, rounded	Vintage 2019 As Filed[3]	Vintage 2019 YTD December 31, 2019	% of Target
NPV of Avoided Cost	$3.3	$2.7	83%
Program Cost	$4.0	$3.7	93%
MW	16.7	11.6	70%
MWH	2,885.9	2,704.1	94%
Units[2]	19,023	15,053	79%

1) Values are reflected at the system level.

2) Units represent average monthly kW at meter for demand response measures (10,071), plus individual participants for smart thermostat energy efficiency measures (4,982).

D. Qualitative Analysis

Highlights

During 2019, the Program continued to experience significant growth. The Program added 3,418 net new devices bringing the total installed devices in DEC to 12,885. The door-to-door marketing (canvassing) efforts have continued to be the most productive marketing efforts for producing enrollments, installations and positive customer interactions. In 2019, the Program canvassed in the Winston-Salem/Greensboro, Charlotte, the greater Charlotte region, Greenville/Spartanburg, and Hickory areas. Over 20,000 customers were reached during 2019 through the canvassing efforts.

Issues

One factor that continues to impact the Program's overall performance is the high number of customers selecting to enroll in the 30% cycling option. Approximately 74% of customers are participating in this option. This is a slight improvement from the 80% participation in the 30% cycling option seen at the end of 2018. The original assumption when the Program was filed was that 50% of customers would select this option. Program staff worked with canvassers to improve their pitches to promote the higher cycling options, improving the current enrollment percentages and bringing them closer to the original assumptions. But, with the high percentage of customers participating in the 30% option in prior years, the overall percentage is slow to come down.

Potential Changes

The Program is evaluating the possibility of adding additional thermostat options to offer customers during the install. The new thermostat will reduce the number of installs that are turned down due to the current version not having features used by the customer.

E. Marketing Strategy

In 2019 the Program continued the efforts of door-to-door marketing using a dedicated canvassing vendor. In addition to canvassing, the Program targets slightly larger and multi-location customers through Duke Energy's Business Energy Advisors.

F. Evaluation, Measurement and Verification

There were no evaluation activities for this program in 2019.

Exhibit 4

SACE
Docket No. E-7, Sub 1230
DSM/EE Rider
SACE Data Request No. 1
Item No. 1-16

DUKE ENERGY CAROLINAS

Request:

For the years 2019, 2020(forecasted), and 2021 (forecasted), please identify the following:

a. Total DSM non-residential opt-outs;
b. Total EE non-residential opt outs; and
c. Total non-residential sales.

Response:

Please see the attached Excel file for actual and forecasted opt out information.


DR%201-16.xlsx

DR 1-16 First Data Request to Duke Energy Carolinas, LLC

	Source:	DSM		EE		Total Non-Residential Sales (kWh)	
		Actual 2019	Forecasted 2021	Actual 2019	Forecasted 2021	Actual 2019	Forecasted 2021
NC	Miller Exhibit 6	18,852,615,603	18,851,271,603	20,042,218,854	20,419,288,797	36,550,697,769	35,749,634,396
SC	R12 Exhibit 3 page 1	9,402,889,130	9,402,889,130	10,446,567,023	10,490,870,196	14,697,398,282	14,895,366,192
Total		28,255,504,733	28,254,160,733	30,488,785,877	30,910,158,993	51,248,096,051	50,645,000,588

Exhibit 5

Portfolio Level Opportunities & Challenges Summary Report

January 2019

In addition to a continued focus on individual program opportunities, Collaborative stakeholders decided in January 2019 to select two priority focus areas for the year:

- Finding ways to increase savings impact for low-income customers
- Assessing Portfolio Level Opportunities and Challenges

The choice to focus on Portfolio Level Opportunities and Challenges was driven by a desire to establish a common understanding among Collaborative participants around the cross-cutting factors that could impact the potential for expanding energy efficiency savings through individual programs. It also provided a way to identify the broader dynamics that would impact ***total*** energy efficiency savings in the years to come. The opportunities and challenges outlined below provide valuable context and help hone our attention on areas for future work together in the Collaborative for 2020 and beyond.

Primary Objective

Through regular convenings of utility staff, energy efficiency advocates and other key stakeholders, the Collaborative strives to facilitate Duke's ability to increase total savings from its energy efficiency and demand response program portfolios and to expand the number and types of customers participating in the company's EE/DSM programs.

Successful engagement requires a two-way flow of information to bring information to Duke from the Collaborative and to the Collaborative from Duke.

The 1% Savings Target

The 1% savings target originated with a Settlement Agreement between the Environmental Defense Fund, South Carolina Coastal Conservation League and Duke Energy on December 8th, 2011 as part of the Duke / Progress merger.

- An annual savings target of one percent (1%) of the previous year's retail electricity sales beginning in 2015; and
- A cumulative savings target of seven percent (7%) of retail electricity sales over the five-year time period of 2014-2018
- Compliance subject to existing NCUC and SCPSC EE program approval process using standard cost-effectiveness tests
- Savings verified by rigorous EM&V

Duke Energy Carolinas reached the 1% target in 2017 and 2018. Duke Energy Progress has come close with 0.94 in 2015, though, savings in subsequent years were lower.

Advocates continue to support efforts to reach or surpass the 1% target year after year. As documented in its annual DSM/EE Recovery Rider filings, Duke has shown that its energy efficiency programs deliver substantial financial benefit to customers, and advocates want to maximize this benefit while also

achieving other organizational priorities related to environment and equity. The 1% savings target serves as a guide for identifying additional savings potential and tracking performance drivers, which was a key factor in the Collaborative prioritizing an examination of Portfolio Level Opportunities and Challenges in 2019. Advocates believe that the reference achievements of other jurisdictions—in some cases 2% of retail sales or greater—are another strong indication that 1% savings is achievable in the Carolinas, even given differences in climate, energy costs, and EM&V practices.

Duke currently seeks to achieve the largest amount of cost-effective savings with the least effect on customer rates. This approach is evident in Duke's preference for incentives and administrative costs to be as low as possible without jeopardizing program performance, and for programs to exceed 1.0 UCT scores by a wide margin. Additionally, regulators have been supportive of programs that are as cost effective as possible.

Advocates, while appreciative of Duke's focus, believe that increasing participation and savings may justify increased program expenditures, even if the cost effectiveness score margin declines somewhat and rate impacts are somewhat greater. Advocates acknowledge the need for programs to be cost-effective, and support inclusion of all avoided utility costs and appropriate consideration of a more comprehensive range of customer and social benefits in cost-effectiveness calculations.

Often, utility performance or Energy Efficiency Resources Standards ("EERS") targets set by other states are used as reference points for savings potential. Duke asserts that those comparisons are often misleading and are not an accurate benchmark given wide variations in how savings attribution is determined in different jurisdictions. Duke believes that choosing 1% as the savings target is arbitrary unless it is based on a utility-specific market potential study.[1] Although DEC has achieved 1% of savings in the past, Duke is uncertain that it will be able to achieve similar savings in the future for the following reasons:

- Federal lighting standards impacts are significant and unknown
- Falling avoided costs may undermine cost effectiveness and limit the programs Duke can offer
- EM&V rigor holds Duke to a higher standard than neighboring utilities
- Incremental savings erosion from increasing appliance standards and market saturation drives up costs and drives down net savings
- Increasing numbers of opt out customers fueled by the snowball effect of more savings driving higher rates and additional opt outs

Many members of the Collaborative noted that the 1% benchmark does not reflect the full range of benefits that can be pursued through demand side management, nor does it ensure that different customer segments are receiving those benefits equitably. For instance, the 1% target does not capture the benefits of demand response programs and does not distinguish from what sectors the savings are

[1] Market potentials studies, while a valuable source of information, are inherently conservative and typically do not represent the upper limit of what is cost effectively possible to achieve.

achieved, nor does it adjust for customers who are ineligible to participate based on their opted-out status.

These considerations prompted the Collaborative to ask whether there are additional metrics that warrant attention for assessing Duke's performance, such as:

- Lifecycle savings targets that give the utility credit for a measure's lifetime savings for every year in which the savings occur, rather than only recognizing the first year savings in the year the measure is installed.
- Cumulative savings where a target is set over several years and the incremental savings accumulate year over year.
- Capacity savings targets that recognize the beneficial effects of demand response and efficiency programs that shift load to periods of lower demand.
- Customer-related targets that set specific goals to encourage efforts to increase savings among historically underserved demographics.
- Growth-related targets focus on proactively capturing savings from new load and new customers coming onto the system.

Pressure on savings:

A number of issues outside the influence of the Collaborative in its advisory forum role have a direct or indirect effect on the Company's ability to achieve energy savings through regulated customer programs. There are numerous factors listed below that are expected to put downward pressure on savings, while others will likely lead to increased savings opportunities. Some will have effects that are uncertain at this time.

- Market Dynamics Limiting Utility Efficiency Savings:
    - Natural adoption of efficiency without utility participation is increasing
    - Cost per unit of savings has been increasing (though new technologies have the potential to change this)
    - More stringent federal standards reduce the incremental savings that can be attributed to utility efficiency programs
    - Increasing socket saturation for standard screw-base LED bulbs
    - Lower contractor capacity in some regions
    - Falling avoided costs

- Market Dynamics Supporting Increased Utility Efficiency Savings:
    - Emerging technologies, such as:
        - Advanced Metering Infrastructure and Wi-fi thermostats
        - Smart appliances
        - Smart phone applications
        - Heat pump water heaters

        - Minisplits
        - Induction cooktop stoves
    - Grid modernization that allows for geographically targeted efficiency deployment
    - Electrification opportunities and growth of the utility customer base (in some areas)
    - Aging housing stock
    - Increasing attention to winter demand peaks
    - Opportunities to improve contractor/vendor education and implementation standards or practices.

- Availability of New and Diverse Delivery Channels
    - Midstream and upstream opportunities
    - Real-time communication with customers
    - Customer access to data
    - Customer segmentation and targeting
    - Vendor innovation (eg. residential savings guarantees)

- Related State Policy and Regulatory Matters
    - Commercial and industrial customer opt out statutes
    - Potential changes in cost effectiveness testing
    - Inclusion of Non-Energy Benefits
    - Increasing building codes
    - Expansion of and coordination with gas industry energy efficiency programs
    - Gas industry opposition to fuel switching
    - Utility performance incentive mechanism constraints
    - Current lack of low income utility performance incentive and defined low-income cost effectiveness expectations
    - Integrated Resource Planning requirements (energy efficiency as a resource, etc.)
    - Executive Order 80 (reducing energy and water in gov't buildings, decarbonization, electric transportation)
    - Renewable Energy Portfolio Standard and associated energy efficiency targets
    - Establishing or coordinating with energy efficiency financing opportunities

Portfolio-level Program Issues

Many members of the Collaborative consider 1% achievable if the Company adds new programs or improves and expands existing ones.

Some members suggest that the Collaborative should assist Duke in tackling the following program-related tasks:

- Find new delivery channels through improved marketing (midstream incentives, bulk replacement, community based nonprofit organizations, etc.)
- Find new sources of funding to leverage (WAP, LIHTC, REAP, Green Bank, PACE, etc.)
- Design programs around new technologies (remote monitoring, etc.)
- Design program(s) that leverage existing expertise by providing leads to contractors that perform EE projects (midstream labor)
- Expand trade ally engagement and minimize barriers to participation
- Provide insights from other utilities which have stronger adoption of measures which under-perform in Duke's programs
- Build on existing Duke programs that have been successful
- Investigate ways to incorporate energy code compliance training into EE programming (new construction and existing for both residential and non-residential)
- Expand the reach and impact of Low- and Moderate Income programs
- Avoid lost opportunities in new homes, businesses and communities by developing growth-related initiatives
- Provide offerings that address the needs of small and medium-size commercial customers

Duke currently has a full-time staff of marketing professionals and a team of employees dedicated to new product development. The managers of existing programs are motivated to improve and expand their programs whenever they see opportunities to do so.

Duke proposes that the best contributions for the Collaborative to make are the following:

- Bring the company details about programs Duke does not have but that other utilities are running successfully
- Represent the interests of the constituencies each member's organization serves to eliminate the likelihood that Duke's programs will leave any customers out
- Express support before the state commissions for the Company's efforts to expand and improve programs
- Promote Duke's programs outside the Collaborative

Areas of Focus for 2020

The following program ideas have emerged as potential areas of focus for 2020:

- DEC Residential New Construction
- DEP Income Qualified Weatherization

- Energy Star Retail Products Platform
- Mobile/manufactured home programs
- Code Compliance Credit justification
- Leveraging savings from Advanced Metering Infrastructure
- Expanded midstream products, such as residential HVAC
- Leveraging alternative funding opportunities such as the Rural Energy for America Program
- Seeking new program opportunities to increase low income savings impact (including continued support for LIHTC developers)
- Explore expanded low-income program coordination with SC WAP.